United Nations
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Santiago Office
Regional Bureau for Education in
Latin America and the Caribbean

Regional Strategy on Teachers
OREALC / UNESCO Santiago

Critical issues for formulating new teacher policies in Latin America and the Caribbean: **the current debate**

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Introduction

The aim of the Regional Strategy on Teacher Policies from the Regional Bureau for Education in Latin America and the Caribbean (OREALC/UNESCO Santiago) is to produce and disseminate specialized knowledge to contribute to the formulation of policies on the teaching profession in Latin American and Caribbean countries. This Strategy is being developed with support from the Centre for Studies in Educational Policy and Practice (CEPPE) of the Catholic University of Chile (which is the Technical Secretariat for the project).[1]

The first phase of the Strategy (2011 and 2012) involved producing a state-of-the-art study on teacher policies in the region and a series of criteria and guidelines for policy-making. This task involved renowned experts[2] and the contributions from national discussion groups set up for this purpose in eight of the region's countries (Argentina, Brazil, Chile, Colombia, Guatemala, Mexico, Peru and Trinidad and Tobago).[3]

The drafting process for that document and the teacher policy guidelines revealed four key areas: initial education; service training and professional development; teaching career and working conditions; and institutions and processes of teacher policies.

The second phase of the Strategic Regional Project (2012-2013) has included an in-depth exploration of specific relevant themes in each of the four key areas. These are the crucial issues that generated additional discussions or questions during the previous phase, and that were felt to require further exploration with a two-fold purpose: more specialized and in-depth focus, as well as comparisons with international first-world experiences. With this in mind, a request was made for working documents to provide diagnostics based on systematized regional information (as well as comparative evidence from the first world), to contribute up-to-date and wide-ranging information for the analysis of issues critical to the design and implementation of public policies on the teaching profession. A new group of renowned regional experts was gathered together for this purpose: Paula Louzano (Brazil),[4] Lorena Meckes (Chile), Gloria Calvo (Colombia), Sylvia Schmelkes (Mexico), Francisco Esquivel (Costa Rica) and José Weinstein (Chile).

In accordance with the aim for this stage, the experts analysed the core issues in each area, as well as the technical, academic and political debates that had been generated as a result. On the basis of a study of the strategies and practices deemed effective, each study produced public policy guidelines for that area that were judged as having implementation potential in the region.

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1 *The Technical Secretariat is made up of Cristián Cox (Project Manager), Carlos Eugenio Beca and Marianela Cerri.*

2 *The following experts drafted documents that were used as inputs for the state-of-the-art study: Beatrice Ávalos (Chile), Sylvia Ortega (Mexico), Denise Vaillant (Uruguay), Mariano Palamidessi (Argentina) and Simón Schwartzman (Brazil).*

3 *See "Background and Criteria for Teachers' Policies Development in Latin America and the Caribbean", UNESCO, Santiago, 2013.*

4 *Paula Louzano invited Gabriela Moriconi from the Carlos Chagas Foundation to take part in producing the document.*

The expert documents were then supplemented by inputs from the Regional Technical Meeting convened by UNESCO/OREALC in Santo Domingo, Dominican Republic, on 6 and 7 June 2013, which brought together experts from ministries of education, academics and teaching union representatives from 23 Latin American and Caribbean countries. In addition, six Latin American experts commented on the draft documents to enrich the discussion and deepen reflections on the issue of teachers and the quality of education.[5] The various proposals discussed were expanded on by the viewpoints presented by those attending the seminar.

The aim of the document by Paula Louzano and Gabriela Moriconi, Vision of Teaching and Characteristics of Teacher EducationPrograms, was to present an analysis based on systematized information on initial teacher education, types of institutional organization and the challenges of coordinating subject-matter education with pedagogical and professional education. The document uses three questions to approach this classic issue at the heart of teacher education: what vision of teachers is guiding initial teacher education in the region? In education systems, how do learning and mastery of the subject content combine with specific didactics (pedagogical knowledge)? What are the prevailing practice systems in initial teacher education within the region and what guidelines could be formulated to make progress in this area?

The document by Lorena Meckes, Standards and Initial Teacher Education, deals with the increasingly important issue of national definitions of teacher education standards – in terms of those entering the training, the training content and process or those who have completed training. The study makes a distinction between content standards and performance standards, and tackles the process of producing standards (particularly the procedures for involving various stakeholder groups – mainly teachers). The connotation of the term in Latin American debates in education is also addressed. The document then puts forward a model of the main uses for standards in terms of training institution accreditation, certification of graduates or those entering teaching, and the formulation of education curricula on standards.

The subject of the document by Gloria Calvo, Professional Development for Teachers: collaborative professional learning, is ongoing training processes. Its central premise is that teachers' knowledge is actively developed in processes of exchanges with peers throughout their career. The study singles out ongoing training experiences that differentiate between the professional development needs at various career stages, from newcomers to teaching (induction and support) to expert teachers. The document prioritizes strategies based on collaborative professional learning with other teachers, and ones that consider the educational institution as a unit where subjects, processes and trajectories come together to form learning communities (which is the central strategy). The author includes a special section on experiences of collaborative professional learning using ICTs, as well as another section on the technical, academic and political debates generated by the strategies in question. She concludes by proposing guidelines for public policy-making in this area.

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5 *The following regional experts made comments on the various documents: Cristián Cox (Vision of teaching and characteristics of teacher-education programme); Beatrice Ávalos (Standards and initial teacher education); Sylvia Ortega (Teachers' professional development: collaborative professional learning); Denise Vaillant (Assessment of teacher performance – State of affairs); Inés Aguerrondo (Elusive politics among volatile teacher policies); José Luis Guzmán (Economic aspects of public policy-making for the teaching sector).*

The Sylvia Schmelkes document, Assessment of Teacher Performance: state of affairs, deals with the politically complex and topical issue of assessing teachers' work. The study examines international experiences in this regard (in Latin America and the first world), with an emphasis on what is assessed, existing models on how to assess, key actors in the process and the types of consequences arising from assessment outcomes. What is studied is then viewed in relation to the key issue of how to incorporate assessment into national frameworks for teaching careers. Relevant policy guidelines are also put forward.

The document by José Weinstein, Elusive Politics among Volatile Teacher Policies, refers to the rarely tackled yet crucial issue of the politics of teacher policies. This means the actors, institutions and processes that enable (or do not enable) the formulation and implementation of coherent courses of governmental action for developing the teaching profession. The study begins by establishing some quality criteria for teacher policies, while also identifying typical obstacles that the region faces in meeting them. According to the author, the region has seen few successful efforts to build consensus and bring together social and political actors around long-term proposals – which is a vitally important when policies seek to make an impact on capacities. The study maps out the main actors and analyses policy-making processes, before suggesting a series of guidelines for change.

Lastly, the document by Francisco Esquivel, Economic Aspects of Public Policy-making for the Teaching Sector, considers the importance of incorporating categories of education economics to improve teacher policy management. The analysis establishes internal areas of action for the education sector, while also identifying highly relevant aspects of public policy management from outside the sector. The study seeks to answer how decisions are made, in terms of economic rationale, on education funding, spending and investment, and then how to distinguish spending on teachers within the education budget. The document also examines the distribution of teacher spending by key categories: basic wages, performance incentives and professional development – while also proposing criteria and guidelines for making improvements.

OREALC/UNESCO Santiago hopes that this publication of a series of academic studies will contribute to the very necessary debate on strengthening the teaching profession, as part of efforts made by the region's countries to improve the quality and equity of their educational systems. In these and other issues not tackled in the book, there is clearly a need to expand research and reflections by incorporating different visions into decision-making on public policies capable of tackling the huge challenges of achieving quality education for all. This goal cannot be achieved without well-trained, socially recognized teachers committed to their profession.

I

Part I:
Issues in initial teacher education

Initial teacher education: vision of teaching and characteristics of teacher education programs

Paula Louzano and Gabriela Moriconi

Introduction

Emid a series of policies on teachers, several studies point to the importance of improving teacher education, especially in developing countries. This is not only to enhance educational processes, but also to generate learning experiences for all pupils – irrespective of their socioeconomic status (Ávalos, 2011).

In that sense, using systematized information on initial teacher education, this document seeks to provide an analysis and point out the dilemmas of coordinating subject-matter training with pedagogical and professional training in Latin America and the Caribbean. The study uses comparative evidence from developed countries to provide categories of analysis and information that can contribute to the design and implementation of relevant public policies in the region.

This document was produced with reference to the theoretical works of authors who aim to analyse teaching as a profession, as well as the accumulated knowledge, provisions, skills and practices associated with that profession. The past 25 years have been particularly rich in this area, and many authors have contributed to the debate at the international level.

Use has also been made of national and comparative information and analyses on initial education policies and programmes in Latin America and the Caribbean and in developed countries. The authors also consulted the reports of national and international agencies and official documents from ministries of education, as well as books and articles published in academic journals. Given the scope of the proposal and the scarcity of specific material available in some cases, some topics or countries have not been mentioned or explored in depth.

The document is divided into four sections. The first section analyses the link between the vision of teaching and initial education. The Second section compares the knowledge and skills needed for teaching, and the extent to which teacher education systems reflect those characteristics. The third part concentrates on understanding teaching practice systems, which are a key component of initial teacher education. The fourth section contains a brief discussion of the core issues involved, and concludes by providing a series of guidelines on relevant topics.

1 Initial education and vision of teaching

The image or notion that society (and particularly policy-makers and teacher trainers) has of teachers influences how the latter are trained. It is therefore important to begin this analysis on initial teacher education by situating these concepts in the current debate.

Villegas-Reimers (2003) describes the metaphors used to define teachers and their social role. By seeing teaching as an art (and the teacher as artist), the teaching process is seen as undefined and completely dependent on the teacher's talent. This denies the scientific nature of teaching. In other words, people are born teachers and their development is a natural process that is not planned or implemented in a systematic way.

Considering teaching as an activity related to common sense implies low (or no) investment in professional development (Ball & Cohen, 1999). Indeed, societies with this view of teachers do not leave room for a public policy debate on initial and in service training (as it would be enough to select the most talented candidates for teaching).

In addition, there is also a discussion of two other visions of teaching: as a profession or simply an occupation (Villegas-Reimers, 2003).

Hoyle (1995) presents criteria to define what is typically considered a profession, and the characteristics that tend to distinguish it from other occupations. These are: social function, knowledge, professional autonomy, collective autonomy and professional values. The idea of professionals is associated with doctors and lawyers, for instance. As with teachers, they can also be State employees working under its guidelines and rules – but maintain their high social status.

The vision of teachers as education workers is linked to the idea that teachers' problems in various settings (including in Latin America and the Caribbean) are basically the same as those of the proletariat – and that teachers' struggles are the same as workers' struggles in general (Gadotti, 1996). These problems include low wages, poor working conditions and increasing control of their work by the employer (the State).

However, the vision of teacher as an education professional, and teaching as a profession, is what frames the current debate. This does not mean that other visions have disappeared, that all countries have the same concept of teacher professionalization or that there are not several visions coexisting in one country.

Being familiar with the international debate on visions of teaching, and how these various viewpoints have been reflected in public policies or tangible initial education experiences, can help the region's countries in their search for a vision of teaching and its link with initial teacher education.

1.1 Developed countries

In a study comparing teacher education in a group of developed countries, Darling-Hammond & Lieberman (2012) used the PISA ranking to classify countries' level of commitment to teacher professionalization and investment in teachers' professional development. Countries with higher PISA scores (such as Finland and Singapore) had a clear vision and direction for their teacher education policies, while other countries demonstrated to a greater or lesser extent (United States and Australia, respectively) the coexistence of divergent positions and visions on the teaching profession and teacher education within the national debate.

In fact, no country represents the vision of teacher professionalization more completely than Finland, as teacher status is based on trust in the professional judgement of teachers who acquire their knowledge during initial education. The Finnish perceive a teaching career as an attractive profession involving work that is considered autonomous based on scientific knowledge and specific skills developed in a post-graduate teaching programme.

This recognition is partly due to the radical change in initial teacher education from short courses lasting two or three years in non-academic institutions until the late 1970s, to a Masters diploma lasting between five and seven and a half years in universities as a minimum requirement. The reason for the change is linked to the fact that teaching is based on scientific research, which is usually the case in academia and postgraduate courses (Sahlbergh, 2012).

Furthermore, the State plays a key role in organizing the system, from the limited supply of initial education places, to the fact that only eight universities train all the teachers in the country (and all those universities are public). Indeed, this is the only way to become a teacher in Finland, as the university diploma constitutes a teaching permit.

In Singapore also, a national vision on teachers' roles in developing the country was a determining factor in a substantive change in teacher education. The 1997 Thinking Schools, Learning Nations plan redefined the role of teachers. Under the plan, teaching in Singapore became the "teaching profession", and as any profession of the future – had to be based on knowledge (Goodwin, 2012).

In Singapore and Finland, the State plays a fundamental role in aligning the vision of a knowledge-based teaching profession and the public policies for the education sector. In Singapore, teacher education is highly regulated and provided by the State. Indeed, all students on initial teacher education courses automatically become officials of the Ministry of Education with wages and benefits comparable to those of existing teachers (with a guaranteed job at the end of the course). As in Finland, Singapore's Ministry of Education controls the number of places on education programmes, and is therefore able to respond to changes in demand for teachers in specific areas.

In Singapore, however, the vision of professionalization is not related to professional autonomy in the same way as in Finland. From the first year of initial education, all teachers plan their career using self-assessment, training and assessment to move up a

grade. To manage this process, the State has developed a complex system (Enhanced Performance Management Scheme (EPMS)) to reinforce professional values and the teacher's responsibility to continue professional development through courses, class observations, peer discussion in school and feedback from central office (Sclafani, 2008). This does not mean that teachers do not decide anything about their work, but rather that all teacher's decisions about their careers are shared with the State-appointed supervisors.

In Australia, the State is also involved in teacher education. In 1988, the unification of the higher education system resulted in all teacher education programmes being transferred to universities (Aspland, 2006). Nowadays, the country's 34 universities that train teachers are public, and some of their funding is from the Commonwealth higher education fund. The grant received by education school students is double the grant for humanities and almost five times higher than the grant received by students of business, law and economics (Mayer, Pacheone & Merino, 2012).

The intention behind the 2010 creation of the Australian Institute for Teaching and School Leadership (AITSL) was to increase the role of the State in teacher education by creating new standards and a national accreditation process for teacher education programmes. Unlike existing accreditation and standard-setting processes in the country (which were considered fragmentary or generic), the new model increased the role of the State, as well as the requirement for teacher education programmes to provide evidence that students have the skills described in the national standards (Mayer, Pacheone & Merino, 2012).

Despite the uniform policy stance, the debate on teacher professionalization is fairly polarized (and is similar to the debate on the issue in the United States). Divergent positions are bound to occur when there is no shared vision on how to train teachers.

In the United States, teacher policies are more related to professional and collective autonomy than to the idea of specialized pedagogical knowledge being crucial for teaching (or that such knowledge can only be obtained through a rigorous training prior to entering the profession). However, as well as a lack of consensus on the role of initial education in teacher professionalization, there is also no uniform policy stance either (Levine, 2006).

In the 1990s, concern about the quality of education in the United States gave rise to two visions on how to improve teacher quality. While education colleges and teacher trainers demanded greater professionalization of teaching through higher standards for entering and remaining in the profession, other reformers (including those responsible for education systems and business owners) stated that the time and financial costs of such a policy would prevent "good teachers" from entering the profession (Darling-Hammond, 2000).

In keeping with the first of those two visions, the National Commission on Teaching and America's Future (NCTAF) produced a manifesto to encourage the (independent) states to increase regulation and control over teacher education programmes through standards, lengthier university studies for training, increased integration between

academic courses and practice and an effort to boost the resources and support for teaching in the country. NCTAF successfully mobilized over 600 education colleges, as well as some state education departments (that have the power to approve and regulate programmes in a decentralized way). One important result of these efforts was the creation of the National Board for Professional Teaching Standards (NBPTS), which established standards for teaching excellence and introduced a teacher certification process that received financial support from the United States Federal Government (Hess, Rotherhan & Walsh, 2012).

The second vision described was strengthened by researchers who saw it as unnecessary to demand traditional certificates from end of traditional teacher education programmes and the demonstration of specific teaching skills through testing. According to these researchers, there is no consistent empirical evidence that teachers with traditional certificates achieve better learning outcomes for their students. Although there is a positive link, it is no significant enough to justify maintaining this barrier to entering teaching (Hanushek & Rivkin, 2004; Gordon, Kane & Staiger, 2006). The researchers and some policy-makers advocate freeing up the potential supply of teachers, such that professionals interested in teaching who lack the credentials can be accepted as teachers and have their quality assessed by pupil performance in standardized tests. For these authors, good teachers can only be identified once they are in the job (before a decision can be made about whether they should remain in the profession).

On the basis of this debate, national pressure mounted for alternatives to traditional training, which was considered too rigorous. As a result, the federal programme Race to the Top included alternatives to teacher education as one of the criteria in the race for resources among the states (United States, 2009). Although almost all of the 55 states have alternative ways of entering teaching (with support from the Federal Government), this alternative certification represents a small minority of those entering the profession in that country (Levine, 2006; Darling-Hammond, 2012).

In some countries (such as Finland and Singapore), emphasis has been placed not only on the idea of teacher professionalization, but also on considering that process as a prerequisite for improving the quality of education. In other countries, such as Australia and the United States (to varying extents), the debate remains polarized between those who believe in deregulating traditional education in favour of alternative routes into teaching, and those who believe in the professional regulation of teaching and the importance of rigorous training.

1.2 Latin America and the Caribbean

In Latin America and the Caribbean, the vision of teachers as workers exists alongside the vision of teachers as professionals (especially in the discourse and actions of unions, associations and other teaching organizations) (Loyo, 2001; Ferreira, 2006). According to Loyo (2001), teacher organizations operate between the notions of worker and professional, and their aims are to improve working conditions using actions similar to

those implemented for other categories of low-status worker. At the same time, they would advocate improved teacher education even more vociferously – with a view to raising their prestige.

The coexistence of the two visions is handled in different ways throughout the region. Some defend the definition of teachers as education workers with professional responsibilities, such as Education International for Latin America (EILA). This definition reflects the description by Ferreira (2006) of the current regional situation: the image of teachers as proletariat exists alongside the desire for professionalization.

Others have adopted the expression "education professionals" to refer to all education workers (including administrative and technical staff). This is the case of the National Confederation of Education Workers in Brazil. This approach of bringing together teachers with other levels can be positive in terms of organization, but usually ignores the idea of teachers as people with the characteristics described by Hoyle (1995) (particularly in terms of professionals with specialized knowledge).

Although the idea of professionalization relates to various types of action to reappraise teaching (such as improved working and employment conditions), the expression "teacher professionalization" is mainly used to refer to a basis of shared actions and specific knowledge learned during initial and ongoing education (Aguerrondo, 2006; Vollmer, 2010; Gatti, Barretto and André, 2011).

This can manifest itself in various ways in different national contexts with their own teacher education structures. In the literature, professionalization is associated with decisions around: (1) demanding specific education for teachers; (2) arranging education within the tertiary level; and (3) arranging education in universities (rather than in other training institutes).

There is consensus on the need for specific training in order to teach in the region. At least this is what is reflected in legislation and in the discourse on achieving teacher quality (Brazil, 1996; Peru, 2010; Uruguay, 2008; CARICOM, 2011). This does not mean that these countries have no practising teachers without general teacher training or specific training in the disciplines they teach. Indeed, several of the region's countries do have some such teachers. Generally speaking, official policies insist on teacher training for those becoming teachers, and seek to promote training for those already in the profession (Vaillant & Rossell, 2006).

However, it is often necessary to hire teachers without suitable training due to a lack of supply of professionals in specific subjects (such as science and mathematics). This is not considered an appropriate solution, but rather an emergency measure. The high number of teachers without appropriate training (according to national legislation) still teaching in the schools of several of the region's countries begs the question of whether hiring untrained teachers has become a deliberate policy (as there has been no major progress with policies to attract professionals in order to change the situation).

There is a strong trend of tertiary-level teacher education in the region. Exceptions include Guatemala, Nicaragua and Honduras, as they maintain primary-teacher

education at secondary level (Ávalos, 2011). The theory behind the need for tertiary education is that the educational demands are too complex for professionals with just secondary-level education (Rego & Mello, 2004). Furthermore, if the reference points for professionals described as having specialized knowledge, shared rules and high social status are always doctors and lawyers, then it becomes increasingly difficult to defend (socially and politically) those models that train less educated professionals in a shorter space of time.

While there is consensus in the region on the need for tertiary-level teacher education, the place of training remains controversial. Some claim that training a reflective research professional requires university education, as only here can the necessary robust academic education and critical thinking be instilled. On the other hand, universities are accused of concentrating on academic and abstract material that is far removed from the reality of education in schools.

As stated by Rego and Mello (2004), no link has been observed between the place of training and quality of training, as some institutions (irrespective of whether they are universities) achieve better results than others. This suggests that the issue is not so much about where the training takes place but about whether the training provided is of a high quality. The starting point for the place of training must be the desired profile of graduates. This profile, in the context of each national setting, should be used to identify those institutional arrangements most likely to produce the highest number of graduates with that profile at appropriate levels of cost (Rego & Mello, 2004).

Many of the region's countries have defined a profile for graduates of initial teacher education, and this profile can take various forms.

Some countries, such as Argentina and Brazil, have national curricular guidelines for initial teacher education. Although the role of such guidelines is to provide a reference for developing curricula, they are broad and the profile fairly general (leaving room for several interpretations). For instance, the Brazilian guidelines state that graduates should have pedagogical knowledge in the areas to be taught, and knowledge of the students (without stipulating what such knowledge should include) (Brazil, 2002). Argentina's guidelines also state that graduates should master the knowledge to be taught and update their own theoretical framework, without specifying what the knowledge should be (Argentina, 2007).

In other countries, such as Chile, Peru, Ecuador and those in the Caribbean Community, standards for graduates of initial or general teacher education have been drafted (or are under discussion). These may help to guide initial education processes. As well as providing a more precise reference for curricular development than guidelines – by describing a series of desirable characteristics for (future) teacher performance –, they have two other advantages over more general guidelines. The first advantage is that the word standard comes from the banner that used to identify soldiers as members of the same side in battle. In the case of teachers, they are united by the professional principles and values of teaching (Ingvarson & Kleinhenz, 2006). The second advantage is that standards provide a measure of how far or close a graduate or practising teacher is from achieving a certain level of performance (Chile, 2012a).

In Ecuador, teachers' professional performance standards are part of a series of educational standards for the quality of education (which also include standards for school management and principals, as well as student learning standards) (Ecuador, 2012). There are specific standards within each general teacher performance standard. For instance, the general standard of a teacher "knowing, understanding and mastering the area of knowledge taught, educational research and theories and their didactics" covers the specific standard of "knowing the didactics of the discipline being taught, as well as the underlying educational research and theories" (Ecuador, 2012).

Chile has standards for practising teachers (Framework for Good Teaching) and for graduates of teacher education programs (Chile, 2008; 2012a; 2012b). The profile for graduates is detailed enough to include subject-matter standards for teaching. The profile of those planning to teach basic education in reading and communication includes the following first standard: "to know about early reading processes and be ready to teach reading". This is demonstrated when the person "knows various (visual, tactile and gesture-based) strategies to facilitate access to the code by pupils, particularly those who have difficulty with decodification" (Chile, 2012a).

The approach of guidelines and the standards-based approach share the vision that it is possible to develop different academic paths or trajectories for graduates to achieve such profiles (as the many and varied training institutions are responsible for designing the curriculum in both cases). However, insofar as standards provide a more detailed reference on what is required in each element of the skill set (as well as presenting ways of demonstrating or testing skills), they are expected to be more easily used by training institutions and more easily evaluated by the public authorities.

2 Initial teacher education and programme characteristics

The debate on the characteristics of initial teacher education involves a theoretical discussion of the know-how, knowledge, disposition and competences developed by teachers, and how training systems can translate these into policies for teacher development (and more specifically in initial teacher education programmes and curricula).

Theoretical studies on the subject are based on the premise that there is a knowledge base for teaching, and that deepening and validating this set of knowledge could improve teacher development, and more specifically their initial education. Below is an analysis of how the literature has emphasized the fact that teaching is based on its own knowledge that is intrinsic to the nature and objectives of teaching.

In the past 25 years, several studies have been published on the subject with different approaches. Some authors emphasize the knowledge (Shulman, 1987; García, 1992); know-how (Tardif & Gauthier, 2001); or competences (Perrenoud, 2001 and 2004) required for teaching (Puentes, Aquino & Neto, 2009). Others refer to a disposition

that must be developed (Nóvoa, 2009), and these could be said to focus on the moral aspect of the teaching profession (Socket, 1994) or a holistic approach that – in addition to those aspects – considers the identity of teaching (Korthagen, 2004).

Those who theorize about the **knowledge needed for teaching** include Shulman (1987), who came up with the concept of the knowledge base for teaching. Shulman is often cited as one of the main authors to contribute to the debate on teacher professionalization, as he deals with the content, nature and sources of knowledge needed to be a good teacher (Puentes, Aquino & Neto, 2009).

In order to understand the intellectual base, rules and practices of teaching, Shulman (1987) carefully analysed how new teachers learn to teach. He concluded that it was not enough to consider teacher training based on the trinity of basic skill, subject-based knowledge and pedagogical knowledge (as was the general way of thinking at that time). The key to teaching seemed to lie in how specific content and pedagogical strategies interact in the teacher's mind at the moment of practical decision-making.

The categories in Shulman's (1987) "knowledge base for teaching" therefore include: (1) knowledge of the subject taught; (2) general pedagogical knowledge (principles and strategies for managing and organizing classes that transcend the remit of that specific subject); and (3) pedagogical content knowledge. The latter was particularly emphasized by the author, as it represented a unique amalgamation of content and pedagogy that is exclusive to teachers – their own special form of professional understanding (p. 174). The meeting between subject-based and pedagogical knowledge is fundamental for Shulman, as it speaks to the teacher's understanding of how certain subjects and issues are organized, represented and adapted in accordance with students' various interests and capacities.

The author seeks to list the sources of this knowledge base for teaching, as it can help design more effective teacher education programmes. The sources include: (1) academic training in the subject to be taught; (2) research into schooling and its processes; and (3) practical know-how.

From the viewpoint of subject-based knowledge, the teacher must not only be familiar with the subject itself, but must also be able to convey to students what is essential or peripheral about a subject (Shulman, 1987). In order to do this, teachers must acquire in-depth knowledge of the discipline, in other words being able to use this knowledge to make connections (rather than simply knowing procedures within that discipline) (Ball & Cohen, 1999). In mathematics, for instance, it is not enough to know how to do decimal multiplication, but teachers must understand what mistakes pupils might make and be able to explain to them the mathematical concept behind the calculation.

For Shulman (1987), this knowledge is based on two sources: bibliography and cumulative studies in each discipline, as well as the academic, historical and philosophical knowledge on the nature of knowledge in these areas of study (p. 9).

Discipline-based knowledge can be divided into **substantive knowledge** and **syntactic knowledge**. The former represents the body of knowledge generated in a specific area, while the latter relates to research perspective and trends in a given area

(Grossman, Wilson & Shulman, 2005). In other words, teachers need to know more than the knowledge in the teaching curriculum, as teaching is essentially an enlightened profession (Shulman, 1987).

In addition, schooling research related to general pedagogical aspects should be based on academic literature on learning, teaching, human development and sociocultural phenomena that influence schooling. Shulman (1987) believes that a general understanding of theories and their applicability in education and schools are equally important in teacher education. This means that the ideas of theoreticians (such as Piaget and Bloom) are as necessary as the empirical studies on specific topics of different levels of student development (such as research showing how primary pupils can develop erroneous concepts when learning arithmetic).

Ball and Cohen (1999) separate pedagogical knowledge into three different parts. The first relates to knowledge on children and young people – their personal, social and psychological development. The second goes beyond individual children and considers how children of different cultural, social and gender groups relate to schooling and knowledge. Lastly, the authors believe that teachers should understand aspects of learning and pedagogy, while being able to connect students to the content.

The final source of the knowledge base is what is learned in practice. Much of Shulman's concept of teaching (1987) results from the work of compiling, analysing and codifying the knowledge that arises from the practice of unskilled and experienced teachers. However, this source is the least present in teacher education (and the area where Shulman directs much of his future efforts).

Other authors demonstrate that mastering discipline-based and pedagogical knowledge is not enough, inasmuch as it is the application of that knowledge in a complex environment that makes for good teaching practice (Ball and Cohen, 1999). There is therefore increased understanding that much of what teachers must learn about teaching must be learned from or during practice (or while preparing for teaching practice) (p. 10). The next chapter returns to the issue of practice during teacher education.

The ideas defended by these authors influenced the development and reforms of teacher education programmes worldwide. For instance, Shulman's definition of the knowledge base for teaching and its sources affected the type of knowledge included in the design of teacher education programmes in the United States and worldwide. Indeed, Shulman's theories form the basis of the work of the National Board for Professional Teaching Standards (NBPTS), which was involved in designing a series of teacher education programmes in the United States (Darling-Hammond & Lieberman, 2012). The ideas of Shulman inspired reform based on teacher professionalization, as well as the development of teacher education programmes in Singapore (Godwin, 2012), and his ideas are also present in the discourse of teacher trainers in Finland (Sahlberg, 2012).

The Canadians Tardif and Gauthier (2001) use the term "know-how" (rather than knowledge) to refer to the action of knowing, understanding and doing associated with teaching. In Brazil specifically, these authors have had the most influence on the academic debate on teacher education. Their work was largely disseminated in

the country from the 1990s onwards (Puentes, Aquino & Neto, 2009). Furthermore, the research of many Brazilian authors (Freire, 1996; Pimenta 1998; and Cunha, 2004) have similar ideas and concepts to those of Tardif and Gauthier. The latter are more conceptual and less operational than those of Shulman, and this approach has influenced the debate on teacher professionalization in Brazil.

Tardif and Gauthier begin with the idea that teachers mobilize four types of know-how when teaching: (1) knowledge of education science, which forms a set of professional knowledge unrelated to the act of teaching; (2) discipline-based knowledge related to subject knowledge; (3) curricular knowledge relating to transforming science-based knowledge into something to be taught in school; and (4) experiential knowledge linked to the teacher's day-to-day work and knowledge of his/her environmental arising from and validated by experience. For these authors, this know-how is a reservoir of the teacher's certainties, models of reality, reasons, arguments and opinions that influence his/her actions (Tardif and Gauthier, 2001).

Unlike Shulman, who attempts to "normalize" teacher education, these authors "problematize" it. For Tardif and Gauthier, the idea that knowledge, competences or know-how can define a professional development programme ignores the fact that these concepts may represent models of knowledge and power (p. 189). In this sense, Tardif and Gauthier (2001) point out two problems with research into teacher development models worldwide (and in the United States in particular): the belief in the professional as expert, and the transformation of the everyday representation of teaching into a form of knowledge.

The first criticism is that teacher education programmes based on a model of teacher rationalism founded exclusively on cognitive aspects (or knowledge) lead teachers to have a scientific and technological vision of teaching (with teacher perceived as an epistemic subject or expert). The second criticism refers to Shulman's dear notion (1987) of compiling, analysing and codifying the wisdom of practice from experienced and inexperienced teachers. Tardif and Gauthier (2001) believe that there are problems with the idea of transforming habits, emotions, intuition, *savoir-faire* and *savoir-être*, opinions, personality, ideologies, common sense, rules and standards and any daily representation into knowledge (p. 191).

Lastly, there is a group of authors with theories about teaching from the perspective of competences. This concept, especially in education, has become popular in our region by means of the work of the Swiss author Perrenoud (although other writers, such as Braslavsky and Zabalza, also use this reference and their ideas are fairly widespread) (Puentes, Aquino & Neto, 2009).

Like Shulman, Perrenoud's concept is directly linked to the debate on teacher education policies in his country of origin (as he directly participated in that process for the city of Geneva in the 1990s). He proposes a series of teaching competences (capacities to act effectively in a given situation based on knowledge) that contribute to teaching practice. These teaching competences are structured into two levels. This first level is what the author refers to core competences, which are the fields or domains he considers a priority for teacher education programmes. These include the capacity to organize and handle learning situations and to work in a team (Perrenoud, 2004).

For the second level of competences, the author produces an inventory of 44 more specific competences that describe training areas in as much detail as possible.

Although Perrenoud (2004) states that his work is not an exhaustive set of teacher education characteristics, he specifies the range of knowledge, dispositions, *savoir-faire* and *savoir-être*. For instance, in addition to traditional skills of knowing subject contents (knowledge) and knowing how to teach it *savoir-faire*, he mentions the skill of knowing how to implement open learning situations based on pupil interest to involve them in research and problem solving (*savoir-faire, savoir-être* and disposition).

In this sense, the author is similar to Shulman (1987): not only is there a set of knowledge, skills, disposition, ethics and collective responsibility for educational professionals, but it is also necessary to see how these could and should be represented and communicated. For both authors, this means that all of the above must guide initial teacher education.

Besides the concern with establishing a set of know-how, knowledge and competences to be developed by new teachers during initial education, some authors stress the importance of considering other aspects of teacher preparation (Grossman, 1988 cited in Grossman et al., 2005; Vaillant & Marcelo, 2012; Russell, 2012).

Vaillant, Marcelo and Russell, for instance, underline the fact that teacher education should be seen as a training for adults who were exposed to teaching practices throughout their own schooling. In other words, aspiring teachers know (through observation, rather than deliberately) what it is to be a teacher. This observational learning has given future teachers beliefs and images around teaching based on their prior experience as pupils (Ball & Cohen 1999; Vaillant & Marcelo, 2012). What is worse, observational learning leads most inexperienced teachers to imitate the habits of their own teachers, without necessarily realising it at the time (Russel, 2012). In initial education, this makes it necessary to find out (and usually change) those beliefs. However, Vaillant and Marcelo (2012) suggest that teacher education fails when it comes to changing the previous beliefs of aspiring teachers. For Ball and Cohen (1999), initial education must be an agent of professional desocialization (page 6). They describe this as a difficult task, as new teachers in schools behave like traditional teachers. The curriculum and pedagogy of initial education programmes must therefore play a key role in changing this situation.

Below are some experiences of teacher education, which it is hoped will form a bridge between the valuable theoretical debate on teacher professionalization and initial teacher education policies in developed countries and the region (with an emphasis on their curriculum characteristics and the extent to which they resemble previously mentioned models).

2.1 Developed countries

The debate on initial teacher education in developed countries focuses on the quest for a training system that reflects the existing vision of the teacher. Some countries

are making nationwide efforts to translate this vision into a single and/or coordinated national teacher education strategy (such as Finland, Singapore and – to some extent – Australia), whereas in other countries there have been vague efforts resulting in a mix of different visions and models for initial education (like in the United States and – to a lesser extent – Australia) (Darling-Hammond & Lieberman, 2012).

Although it is difficult to analyse the ways and extent to which ideas or theories from the teacher education debate have influenced national policies or programmes, it is possible to find some overlap in the literature.

For instance, despite the fact that the debate on teacher professionalization in the United States has not generated a consensus on how to train teachers, the reflections of Shulman and his followers have made an impact on the 300 plus colleges of education in the country to have created programmes that go further than the traditional four-year training to enable subject-based and pedagogical knowledge to be integrated through practice in intensive field schools (Darling-Hammond, 2000).

In Finland, the obligation to hold a teaching diploma to work as a teacher is in keeping with the type of professional that people there want to see at the end of teacher education (and therefore with the teacher education programmes and routes in the country). In the late 1970s, legislation on the teaching profession (*Finnish Acts on Teacher Education*) transferred all teacher education programmes (primary and secondary) to university and required a Masters degree (taking between five and seven years) to work as a teacher in the country. This established science and academic research as the knowledge base for teaching. It also placed teachers on an equal footing with high-status professionals who need an academic Masters degree (Sahlberg, 2012).

Indeed, teacher education in Finland is research based, which means that it must be informed by scientific knowledge and concentrate on the cognitive skills and processes used in research methods (Jakku-Silvonen & Nemi, 2006). The principles of this model of teacher education include Shulman's concept of **"pedagogical content knowledge"**, a strong practical component, evidence for decision-making and the idea that the teacher is part of a community of educators.

Although teacher education programmes in Singapore also based their curricula on evidence and scientific research, the prevailing model in the Values, Skills and Knowledge model (from the plan that redefined teaching roles – Thinking Schools, Learning Nations) comes from a set of values for the teaching profession. These include care and concern for pupils, commitment and dedication to the profession and the belief that all children can learn.

These values support a set of skills and knowledge for teaching. In a study of teacher education programmes in Singapore, Goodwin (2012) found that they were inspired by the work of Shulman and his followers (particularly their emphasis on pedagogical knowledge of content within the curriculum).

In Australia, one of the consequences of transferring teacher education programmes to universities in 1988 was bringing the programmes in line with more rigorous certification and regulation criteria, as well as the professionalization of the course as a training informed by scientific knowledge (as in Finland). Intensive research into teacher education worldwide (and Shulman's ideas in particular) inspired a change from the bureaucratic or even artisan training model to one based on evidence-based scientific research (Aspland, 2006).

In order to understand the role that such theories or theoretical models of teacher education have played in each country's specific policies, it is vital to analyse the curricula of national teacher education programmes in more detail.

For instance, an analysis of teacher education curricula in Finland and Singapore shows not only intense subject-matter training, but also a key role played by the pedagogical content knowledge and intensive practice. In both countries (and in some parts of the United States), teacher education is full time. The training programme curriculum for primary school teachers in the Finnish university of Jyväskylä involves 9,000 academic hours (7,800 hours of classes and 1,200 hours of practice). This is the equivalent of eight hours a day for five and a half years.

In Finland, primary teacher education has three different areas: theory of education, pedagogical knowledge of subjects and teaching practice. It is worth mentioning that Finnish students enter teacher education programmes with robust knowledge and skills in terms of the discipline-based content studied in secondary education. Those who enter teaching have above-average marks in a curriculum of 17 subjects including physics, chemistry, philosophy and at least two foreign languages. Primary teachers in Finland have not only a robust subject-based training, but also go through training that allows them to acquire substantive and syntactic knowledge of the subject content – which several authors cite as being essential for good teaching (Shulman, 1987; Ball & Cohen, 1999; Vaillant & Marcelo, 2012).

As for the training of secondary teachers in Finland, there are two ways of graduating. Most students apply for teaching with the Department of Education or Education Schools once they have finished their subject training with a minor in another two subjects (such as a major in Finnish language and a minor in literature and theatre). These students complete a one-year Masters programme of 1,800 hours in which they are trained to teach their subject and develop a research project. This adds up to almost eight hours a day for more than 200 days.

The other route is to apply directly to Education Schools and study subject-matter content for the first two years. These students tend to complete 2,700 hours specializing in one discipline (such as mathematics) and another 1,800 hours on another subject (such as music). Education Schools coordinate with specific subject departments in terms of courses on offer, with one of the main aspects of initial education in Finland being the extraordinary connection between Education Schools and specific subject

departments (due to the shared commitment to teacher education throughout the university). Cooperation (rather than competition) among faculties is considered key in the success of Finnish universities (Sahlberg, 2012).

The second part of the training is identical to that of students from other departments, with the only difference being length of training (one or two years). Table 1 describes both routes of the teacher education programme for the University of Helsinki.

TABLE 1. STRUCTURE OF THE PEDAGOGICAL ELEMENT OF SECONDARY TEACHER EDUCATION IN THE UNIVERSITY OF HELSINKI, 2011

Period	Curricular component	Credits	Classroom hours	Practice
First	Learning and development psychology	4	120	
	Special education	4	120	
	Introduction to subject-matter didactics	10	300	
Second	Practice in professional development school	7		210
Third	Social, historical and philosophical development of education	5	150	
	Evaluation and development of teaching	7	210	
	Advanced practice in professional development school or field school	5		150
Fourth	Seminar: teacher as researcher	4	120	
	Final practice in professional development school or field school	8		240
Masters thesis	Research methodology	6	180	
Total		60	1,200	600

Fuente: Adaptado de Pasi Sahlberg, 2012.

As in Finland, Singapore's teacher education is full time. Although there is only one university that trains teachers, there are several teacher training routes. However, there

is a set of curricular content shared by all routes to ensure programme quality and coherence.

In the United States, some education colleges organize their teacher education as in Finland (namely one- or two-year post-graduate programmes for students from universities or five-year undergraduate programmes). In both models, students spend one year preparing for teaching, as these programmes offer a year of experience in a field school. The difference with the Finnish model relates to the dedication to research and the Masters thesis.

Many such programmes in the United States have professional development schools set up in conjunction with the Education Departments, to ensure a proper structure for the clinical preparation of beginners. Just as with teaching hospitals in medical schools, these training centres provide practice opportunities and are organized by support the training of new professionals, broaden the professional development of practising teachers and promote research. These approaches are similar to the reforms of teacher education in countries such as Finland and Singapore.

In Australia, owing to increasing pressure from standards, training programmes tend to be results based. As a result, the attributes or competences in standards are used to structure programmes overall and for each subject (Aspland, 2006). These standards are therefore used to develop pedagogical practices and to assess student progress. In this sense, most teacher trainers on Australian programmes use a series of assessment instruments such as observation protocols with assessment scales linked to national standards for professional teacher competence, portfolios and material prepared by students on the basis of a case study. For instance, future teachers can be asked to prepare a class for a group of students with certain characteristics or demonstrate what type of feedback to give to a pupil not able to carry out a given task in class (Aspland, 2006; Mayer, Pacheone & Merino, 2012).

It is worth highlighting other characteristics of certain training systems in developed countries, such as the major national coordination effort on the part of ministries of education in Finland, Singapore and Australia to ensure coherent and standardized programmes.

In Finland, for instance, although each university defines its curriculum independently, the Ministry of Education currently requires each university to produce an up-to-date and comprehensive strategy for its teacher education programme, in order to improve the coordination of initial education provision and the professional development of practising teachers (Sahlberg, 2012). In Finland's teacher education programmes, the courses (namely those provided by the university professors) are organized around the same pedagogical principles advocated in teacher education. Therefore, although the university professor has some autonomy, colleges of education must follow a detailed plan including each teacher's work to improve teacher education at the national level.

Comparative studies of successful programmes reaffirm the above characteristics of international experiences that have yielded positive results. This research shows that the debate on teacher education should not focus on the formal aspects of programmes. Given the complex nature of teaching, successful programmes usually have a series of shared characteristics, rather than a single format. These characteristics include a vision of the teacher being trained and the programme curriculum, as well as a curriculum structure in which the taught content relates to the learning process, while the latter also relates to the learning context (Darling-Hammond et al., 2005).

Programmes that consist of a series of unconnected disciplines and lacking a shared notion of teaching and learning for the entire curriculum are not usually able to affect teaching practice. Those programmes designed to emphasize a consistent vision of teaching and learning, while integrating practical work with subject-matter disciplines, tend to produce more effective teachers (Darling-Hammond et al., 2005).

The literature suggests that programme content tends to be more important than programme length, and that the interaction between subject-matter content and its teaching in school is key to training more effective teachers (Darling-Hammond et al., 2005). This was predicted by Shulman (1987) in his research on the pedagogical content knowledge. The ability to connect with practice, using the materials and tools of professional experience, is what helps to train a good teacher.

What follows is an analysis of some characteristics of teacher education programmes and their curricular content in Latin America and the Caribbean.

2.2 Latin America and the Caribbean

As pointed out by Ávalos (2011), it is difficult to identify the curricular content of study programmes, the training processes and different formats of teacher education in each Latin American and Caribbean country because of the wide variety of educational institutions present in the region. Calvo, Rendón and Rojas (2004) identified almost 650 undergraduate programmes in education in Colombia in 2001. Vollmer (2010) highlighted the wide range of courses in teacher education institutions in Argentina: 700 State-run and 500 private ones. In 2009, the region's largest country – Brazil – had 13,000 initial teacher education programmes, according to Gatti, Barretto and André (2011).

However, it is possible to identify some general aspects of the region's initial education programmes, as well as presenting some examples of their curricula. As shown in Table 2, there are significant variations among the region's countries in terms of length of study. In several countries, the minimum training required can be less than four years. This is the case in Brazil, Colombia, Guatemala, Nicaragua and Trinidad and Tobago.

TABLE 2. LENGTH OF STUDIES FOR INITIAL TEACHER EDUCATION IN 11 LATIN AMERICAN AND CARIBBEAN COUNTRIES (INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION)

Country	Initial	ISCED 1	ISCED 2	ISCED 3
Argentina	4 - 5	4 - 5	4 - 5	4 - 5
Brazil	3 plus	3 plus	3 plus	3 plus
Chile	4 - 5	4 - 5	4 - 5	4 - 5
Colombia	2 - 5	2 - 5	5	5
Guatemala	3 - 4	3 - 4	3 - 5	3 - 5
Mexico *	4 - 5	4 - 5	4 - 5	-
Nicaragua	3	3	5	5
Peru **	5 - 6	5 - 6	5 - 6	5 - 6
Dominican Republic	4 plus	4 plus	4 plus	4 plus
Trinidad and Tobago	1 - 2	1 - 2	1 - 2	1 - 2
Uruguay	4	4	4	4

* ***Upper-secondary teachers (ISCED 3) are not trained in teaching, and tend to be graduates from various university courses.***

** ***Some students in higher pedagogical institutes complete an additional one or two years of university study to achieve a bachelor's degree.***

Source: Prepared by the authors, on the basis of OREALC/UNESCO Santiago (2013), Guzmán et al. (2013) and Uruguay (2008).

The hours of study in teacher education programmes also vary across the region's countries. In Argentina, all teaching programs last a minimum of 2,600 hours spread over four years (Argentina, 2007). In Brazil, teacher education programmes for ISCED 2 and 3 involve at least 2,800 hours, while training programmes for initial and ISCED 1 teachers involve at least 3,200 hours (Brazil, 2002; 2006). In both cases, the hours must be completed in at least three years (as shown inTable2). In Peru, the Basic National Curriculum for Professional Early Education Teachers and Primary School Teachers define a workload of 5,400 hours over five years of study (Peru, 2010).

It is vital to mention that not all of these hours are necessarily spent in attendance at the training institutions. A document from the Caribbean Community Task Force for Teacher Education describes the initial education arrangements in the region's countries. These are: attendance based; mixed or partly attendance based (attendance and online); online; and attendance based and distance learning using printed materials. The programmes can be divided into full-time and part-time ones (CARICOM, 2011). As stated in many

research studies, programmes with a distance-learning component are very common in Latin America and the Caribbean (Martinez, 2006; Cox, Meckes & Bascopé, 2010; Gatti, Barretto & André, 2011).

In Peru, for instance, classes are attendance based in the first eight cycles, with the final two combining attendance-based and distance learning (with students developing their professional practice in an educational institution) (Peru, 2010). In Colombia, there are differences in the minimum programme length based on the mode of study: five years for full-time day-time attendance and six years for evening classes, part attendance based and distance learning (Martinez, 2006).

In many countries (such as Chile and Brazil), blended, distance-learning or attendance-based classes a few days a week during holidays were originally aimed at training teachers that were teaching without a diploma, and were then extended to include graduates from secondary education (Cox, Meckes & Bascopé, 2010). In Chile, between 12% and 14% of teachers practising in basic education in 2005-2006 received training in one of these modes (Telias & Valenzuela, 2008; Ortúzar et al., 2009).

In Brazil, since 2005 there has been specific legislation for distance-learning higher-education courses, which must last the same as attendance-based ones and have equivalent diplomas and certificates (Gatti, Barretto & André, 2011). According to the authors, in 2009, enrolment in distance-learning programmes accounted for a third of total degree enrolment in Brazil. Gatti, Barretto and André (2011) point out two tensions in their analysis of the Brazilian situation that can be used as a basis for a discussion on teacher education using distance learning throughout the region. The first tension relates to the fact that this arrangement requires appropriate prior training in autonomous reading and interpretation of texts, as this type of study is relatively solitary. However, the capacity to work independently is not always fully developed in the region's students due to the weaknesses in previous training. The second tension is that the pedagogical relationship in the first few years is only possible in attendance based programs, and this relationship involves complex didactic and relational aspects that call for significant levels of cognition, emotions and communication. According to these authors and other experts, distance learning does not promote the development of the necessary aspects of the presence-based daily pedagogical relationship that will form when the graduate begins to teach (Gatti, Barretto & André, 2011).

Furthermore, even attendance-based training that ensures the closest possible contact with teachers and training institutions may often be part time (Martinez, 2006; Cox, Meckes & Bascopé, 2010; Gatti, Barreto & André, 2011). A large proportion of students work full or part time while completing initial education to be teachers. This is completely different of the context of developed countries, where most students attend higher education full time (at least in the early stages of their training). Therefore, although the teaching commitments are not always very different from the programmes in developed countries, students have much less time for their studies outside class (which must have an impact on the quality of their training).

Although there are no studies comparing the curricular content of teacher education programmes in the region, there are specific analyses of certain countries with shared problems in this area.

In a study of the curricula of a sample of teacher education institutions in Brazil, Gatti and Nunes (2009) found that primary teacher education programs only superficially covered the subject-matter content within the teaching practices and methodology courses, and that pedagogical subjects were more focused on the "why" than the "how" of teaching.

As part of training for secondary teaching in Brazilian universities, the content knowledge of the subject is generally studied in more depth. However, the problem lies in pedagogical training for teachers (which is much more limited) (Gatti & Nunes, 2009). According to Gatti, Barreto and André (2011), redesign, reorientation, additions and new developments in guidelines and proposals have not affected the basic shape of training for secondary education in Brazil. Training in each curriculum subject remains in separate courses based on the division of science. There is no shared base and a clear separation between subject-matter training and pedagogical training: they are two worlds that do not meet (Gatti, Barretto & André, 2011).

Luis Piscoya, in a report for UNESCO (2004), stated that the current concept of teacher education in Peru is that teachers should be mainly trained in how to teach (and that what to teach is secondary). According to Piscoya, Peruvian teachers have inadequate training in their specialist subject, and this is an obstacle to teaching being recognized as a profession.

Ávalos and Matus (2010) also describe shortcomings in the initial education of mathematics teachers, based on the application in Chile of the Teacher Education and Development Study in Mathematics (TEDS-M) of the International Association for the Evaluation of Educational Achievement (IEA). A comparison between teacher education curricula in Chile and the international framework applied in TEDS-M shows that in Chile mathematical knowledge and the relevant pedagogical knowledge are very limited (Ávalos & Matus, 2010). According to the authors, even where there is greater coverage of pedagogical subjects that is closer to the international framework, this did not appear to have an effect on the knowledge demonstrated by future teachers (and particularly their capacity to reason about educational situations and suggest relevant pedagogical actions in response).

In terms of the links between specific subject-matter training and pedagogical training, Gatti and Nunes (2009) emphasize the lack of coordination between the two components of teacher education programmes for secondary education in Brazil. According to the authors, training programmes for primary education are also highly fragmented, as many subjects were completely unrelated within the programs. This is very far from the integrated vision of teacher education promoted by the above-mentioned systems of Finland and Singapore or the programmes of excellence in the United States.

Uruguay was found to have curricular fragmentation in teacher training for secondary education (Uruguay, 2008). According to the Government of Uruguay, fragmented plans and modalities generate a diversity of educational practices, criteria and standards that does not provide graduates with a shared language (Uruguay, 2008). This assessment led to the creation of the National Single System for Teacher Education in 2007. As a result, curricular design was systematized to consist in three single plans (primary

teachers, secondary teachers and technical teachers), with each having a Shared Professional Core (common to those teaching at all stages of learning). According to the document presenting the System, the aim of the Shared Core is to focus on certain knowledge relating to education as a shared subject of theoretical/practical analysis that frames the work of any education worker (primary teachers, secondary teachers and technical teachers alike). This System intends to strengthen the professional spirit of education workers from their undergraduate training (Uruguay, 2008).

Several of the region's countries, including Argentina and Peru, have also worked on changing the curriculum design for initial teacher education to consider the training of teachers for all levels of education as a whole by strengthening the shared and the specific knowledge within the profession (Argentina, 2007; 2009; Peru, 2010).

Although official national documents and the very few national studies reveal a change in national guidelines on the curricular design of programmes, new studies are needed to shows how teacher education curricula are being implemented in the region (and in particular how pedagogical training and disciplinary content are being integrated).

3 Practice systems in initial teacher education

It is not enough to define the knowledge, know-how and competences that should be learned and developed in teacher education programmes when it comes to designing a coherent and sufficiently integrated curriculum. For Ball and Cohen (1999), teacher education must be practice based, as subject and pedagogical knowledge are vital but not enough to define what the right teaching practice is for each context.

According to these authors, true professional education must be able to prepare people to practise a profession. In teaching, this involves experimenting with the tasks and thought processes that are typical of and essential for the teaching profession (Ball & Cohen, 1999 page 12). Teacher education programmes should therefore be based on pedagogies that enable such experimentation and reflection. Clinical work, assessment of performance and portfolios, learning and teaching analysis, case studies, autobiographies and practice research should not only be present in teacher education curricula but should be interrelated, connected to academic disciplines and organized according to the level of preparation of the aspiring teachers (Darling Hammond et al., 2005).

This does not mean that the only important aspect of future teacher's education is the experience in a classroom, but rather that there is a possibility of learning from and with teaching practice materials and working with pedagogical concepts and discipline-based content using those specific materials (Ball & Cohen, 1999). Pupil homework, classroom objects, films of classrooms and teaching/learning cases therefore play a key role in this practice-based training model.

Ball (2012) sought to identify and disseminate a set of specific skills that should be learned by all novice teachers. Based on research and experience, she and other

researchers from the University of Michigan attempted to identify practices that could be taught and assessed, instead of the more general provisions developed by other theorists.

High-leverage practices are thought to be key to teacher education, in that they support performance in the classroom. These practices include: (a) leading a discussion involving the entire class; (b) awakening and interpreting each student's thinking; (c) explaining key content; (d) asking questions on content; (e) establishing rules and routines for teaching and class work that are key to the content; (f) recognizing specific patterns in the thinking and development of pupils in a subject area; and (g) organizing and managing small group work (Ball, 2012).

What is more important than defining high-leverage practices is the ability to use them in teacher education courses. For instance, the practices are at the heart of assessment in the teacher education programme at the University of Michigan. Future teachers are assessed in relation to these skills, rather than being assessed in a fragmented way on each course (as was the case previously).

Generally speaking, the connection between theory and practice is usually the weak point in teacher education. After analysing differences and similarities between the training of several types of professional, Shulman (2008) concluded that, while practice and practice research were at the heart of medical training, they were absent in teacher training.

For some authors, the institutionalization of teacher education creates an inherent conflict between theory and practice (Labaree, 2008; Levine, 2006). Insofar as "normal schools" (teacher colleges) are left behind in favour of university, schools of education become just an institutional setting for training teachers (whereas normal schools had this as their main purpose). In most cases, subject content is learned in a faculty or school different from the school of education, with the latter being responsible for just the pedagogical aspect of teacher education. In the university hierarchy, disciplinary/theoretical knowledge is more highly valued than pedagogical/vocational knowledge. In other words, the further away teacher trainers are from the practical element of education and teaching, the higher their status in the academic setting they share with their university colleagues (Labaree, 2008).

In the United States, the Holmes Group (an association of deans from schools of education) criticized the gap between such schools and practice. In a detailed study of the country's schools of education, Levine (2006) concluded that – while some programmes do integrate theory and practice – most prioritize academic study over practical work. Not only do aspiring teachers spend a short time in schools, but there is also a limited connection between what they see there and what they learn in university classes. Furthermore, many schools where practice is carried out are not suitable, and insignificant involvement by teacher trainers means that the aspiring teachers do not have their practice monitored.

However, some developed countries have struck a healthier balance between theory and practice in their teacher education programmes by strengthening ties between

training institutions and schools (as well as institutionalizing a practice system in their programmes).

3.1 Developed countries

In the international debate on teacher education, the concern to deepen the connection between theory and practice is the most common theme, as well as increasing teachers' capacity to work with increasingly diverse populations. (Darling-Hammond & Lieberman, 2012).

Developed countries that already have excellent teacher education systems, as well as those where teaching policies remain a subject of debate or reform, have all sought to improve their practice systems. This has involved increasing the time that future teachers spend in schools during training, as well as a greater concern for the quality of the practice experience (Darling-Hammond & Liberman, 2012).

In Finland and Singapore, teacher education is full time (with much of the time dedicated to practical experience). In Finland, a third of the teacher education programme is given over to practical work (Sahlberg, 2012).

From an institutional point of view, there are strong links between training institutions and schools in both countries' educational systems. Furthermore, the schools where practice takes place play an active role in teacher education. In Finland, this can be the case in university (where future teachers practise their skills in seminars or small groups of colleagues) and in schools that are directly linked to the university or belong to a network of field schools designed for this purpose. Professionals in these schools have more professional experiences and are supported by supervisors who are jointly responsible for the training of new teachers (Sahlbergh, 2012). In Singapore, future teachers complete their practice in a school designated by the Ministry of Education (that they will probably work in after graduation). The school's most suitable teacher is selected to be a particular student's collaborator, and the deputy head or subject coordinator is appointed mentor for linking the school with the university (Godwin, 2012).

Another characteristic of these countries is the institutionalization of actors taking part in practice systems and coordination between universities and schools in terms of each person's role in teacher education. In other words, academics, tutors, practice supervisors, master teachers and school collaborators work together in teacher education (Darling-Hammond & Liberman, 2012).

In Finland and Singapore, the practice system is progressively structured and involves a series of pedagogies. In Finland, practice is divided into three phases: basic, advanced and final. During these phases, future teachers observe the class of an experienced teacher, practice classes with colleagues and give classes to different groups of children under the supervision of their university tutors and school supervisors (Sahlbergh, 2012). In Singapore, first-year students spend two weeks in the school getting to know their practice setting. In the second year, they spend five weeks observing and reflecting on

teaching practice. For the next three years, the future teacher is responsible for teaching 20 to 24 lessons to pupils in various grades.

In the United States, a study comparing seven successful programmes found that their shared characteristics included: intensive practice (at least 30 weeks) linked to disciplines or courses with a strong element of monitoring/supervision, close institutional ties and a conceptual coherence between the university and field schools, as well as the use of pedagogy to connect the learning of new teachers with school practice (Darling-Hammond, 1999).

However, these do not tend to be the defining characteristics of teacher education programmes in the United States. Curricula there usually reflect more of a concern with the number of years, hours, subjects and the length of practice, rather than a concern for what makes a good teacher and how to organize a programme to achieve this (Levine, 2006).

The proof that the issue is far from resolved in the United States (despite abundant literature on the subject) is the lack of confidence that teachers, heads and teacher education programme leaders have in the effectiveness of existing models. A survey of these stakeholders showed that the most important issue for all three groups was the need to strike a healthier balance between subject-based training and practice (Levine, 2006).

3.2 Latin America and the Caribbean

There is a growing interest in practice during initial teacher education in Latin America and the Caribbean. This interest is reflected in curricular design and guidelines, as well as in regional literature on teacher education.

There are several ongoing debates, and these vary according to the level at which initial teacher education takes place. Although most of the region's countries train teachers in tertiary education, there are countries where many future teachers still study in secondary-level normal schools. In such cases, practice is usually part of training programmes. However, the traditionally proposed relationship between theory and practice, represented by the old normal schools and their (primary-level) practice departments, involves a model based on the assumption that teaching is learned by imitation (with limited scope for reflective practice) (Aguerrondo, 2004).

This also applies to some higher education pedagogical institutes, as many were previously normal schools. Students often reproduce a model that, while it may be advanced in terms of organization, planning, use of time and strategies, does not consider the series of planned actions leading to a learning objective (without which the actions lose their meaning) (Ames & Uccelli, 2008). The problem with this programme model is that the emphasis is on the form, rather than the content or reflection on practice.

The most intense debate usually concerns tertiary-level education, where new theories suggest that practice should be "learned" (Aguerrondo, 2004). However, the author states that there is not yet a widely accepted "practice didactic".

There are some trends that are emerging in terms of practice during initial education in the region. Identifying these trends does not mean that countries have successfully resolved all the challenges pending and achieved the models described in new theories and international experiences. This is to highlight elements of the discussions under way in other regions.

The first trend is the idea that practice should permeate the entire initial education period in a way that goes beyond the vertical approaches in which teaching practice had a small place at the end of training. Guidelines for initial teacher education in Brazil, for instance, state that practice should be involved from the outset, and be part of the whole teacher education programme (Brazil, 2002). These guidelines also state that all curricular courses (not just pedagogical ones) will have a practice dimension (without specifying the form this would take) (Brazil, 2002). Although Brazil has no specific empirical studies on the matter, experts suggest that these rules are not implemented in the curricula of training institutions there (Gatti, Barretto & André, 2011).

The second trend is the diversity of practice, which should be made increasingly complex. There is a good example of the use of practice in initial teacher education in the curricular guidelines of Argentina. According to the guidelines, practice begins at the start of the training in field activities (observation, participation and cooperation in schools and the community, including the systematization and analysis of observations), as well as in set teaching situations in the institute's classroom (case studies, analysis of experience and microteaching). This is gradually stepped up until it becomes teaching practice in classrooms, which culminates in full pedagogical residency (Argentina, 2007).

In Peru, the Basic National Curriculum For Primary Education Teachers includes a practice course in each of the 10 semesters (Peru, 2010). The curriculum also includes the idea of progressively more complex practice. The first semester includes identifying the community's needs and the organization, implementation and evaluation of social outreach activities. In the tenth semester, activities include the planning of teaching units and learning sessions (Peru, 2010).

The third regional trend is the growing concern with choosing school settings for students to work in, by offering a range of settings while ensuring that teachers are able to learn there (Aguerrondo, 2004). Furthermore, institutions are beginning to work on improving the link between training institutions and schools where trainee teachers are placed, based on the need to build solid training networks that go beyond the bureaucratic fulfilment of formal procedures to include the development of pedagogical experiences and work in various school settings (Argentina, 2007).

While there are initiatives that resemble the models implemented in the developed countries mentioned, there is a need for comparative studies to reveal a more detailed picture of how teacher education practices are being implemented in Latin American and Caribbean countries. As we saw with developed countries, the success of teacher education models is partly dependent on the institutionalization of these practices.

It is well known that there are still a large number of programmes based on distance learning or evening and weekend classes, in which practice activities are more uncertain (Gatti & Barretto, 2009). Cóx, Meckes and Bascopé (2010) found that practice was not part of such programmes in Chile. As these programmes were originally targeted at practising teachers, their work as teachers is seen as sufficient practice for a student in initial education. This is clearly dealt with in Brazilian guidelines, which specify that supervised curricular practice can be halved if the student is teaching in basic education (Brazil, 2002). This does not meant that the hours students teach cannot be considered as practice, but that they are carried out with no supervision from the training institution and are not regularly used in activities to reflect on and analyse experiences (for instance to improve teacher education). If the researchers' findings on teacher education are true, it is vital to change the habits and beliefs that these teachers learned by observing their own teachers (Ball & Cohen 1999; Vaillant & Marcelo, 2012; Russel, 2012).

In contrast, "whole" institutions are presented as an alternative to this precarious model of training. Vaillant (2004) describes "whole" initial education centres as those that seek to train future teachers in a comprehensive way. These institutions not only deal with the core of cognitive development, but also the basic core of personality (as the future teacher has to develop a series of skills – such as problem solving and teamwork – that cannot be acquired through information or knowledge (Vaillant, 2004).

Regional Teachers' Centres (CeRPs) that train secondary and technical education teachers in Uruguay are presented as a good example of a "whole" institutions, partly thanks to students' full-time dedication to the training programme. According to Vaillant (2004), the weekly timetable of 40 hours ensures that students are exclusively dedicated to their studies (completing 4,200 hours over three years).

In addition, there is a high percentage of full-time trainers working 40 hours a week (with at least 20 hours of direct teaching time). The remaining 20 hours are spent on other forms of teaching and activities, including: consultation times with students; study guidance; course/subject/activity coordination; coordination with schools to arrange teaching practice; participation in technical teams providing pedagogical support to schools and/or training for practising teachers (Vaillant, 2004).

The author states that CeRPs have generous time allocations that lend themselves to broad and complex learning and teaching strategies. Their vision is for a back-to-basics curriculum that covers less but offers opportunities of deeper domain. The trainers spend more time with students based on their needs: those who have learning difficulties, need more demanding activities or those with very different learning styles. The eight-hour day provides more "academic time" for students to do a great deal of reading and many written tasks. Vaillant (2004) explains that the creation of eight-hour days for collective work was found to produce significant changes in students, as they are removed from their usual setting to be placed in a full-time programme that harnesses their motivation, efforts, energy and time in an integrated way.

4 Discussion and possible public policy guidelines

The preceding pages have analysed the link between the vision of teaching and initial education in the region's countries and some developed nations. We attempted to compare the knowledge, know-how and competences needed for teaching, and the extent to which the training systems of these countries reflect those characteristics. Lastly, practice systems were described in the light of key elements of initial teacher education.

The aim of this section is to contribute to the design and implementation of public policies relating to initial teacher education in the region. More specifically, this is in terms of teacher professionalization, programme characteristics (particularly the curriculum) and practice systems within initial education. As well as presenting a series of possible guidelines, this section also addresses the tensions related to these issues in the region.

4.1 Teacher professionalization

The historical development of teacher professionalization in the region and the above-mentioned successful experiences of developed countries have given rise to a series of difficulties and opportunities for the formulation of potential policy guidelines.

One major difficulty lies in the differences in the quality of preparation of students enrolling on teaching courses in our region and in developed countries. Although a discussion on prior skills of those enrolling for teacher education relates to the status of the profession in the country concerned (and this is also a concern for most developed countries), the standard of the education systems in developed countries is a guarantee that the vast majority of students have mastered these basic skills (and their teacher education can therefore continue unhindered). However, the situation is different in Latin America and the Caribbean. As demonstrated by Ávalos (2011), future teachers show no signs of having the skills (linguistic, mathematical and general knowledge) that they should have developed at secondary school (and that are necessary for tackling the demands of higher education).

Furthermore, merely increasing the status of such courses may not be enough to ensure prior preparation of teachers in accordance with the models observed in developed countries (a reflective, autonomous research professional) as long as educational quality standards remain low in our school systems. For instance, the performance in PISA tests of the highest income quintile in Brazil was lower than the performance of the lowest income quintile in Finland, Singapore and Australia. This means that the best prepared secondary students from Brazil's highest socioeconomic groups are still below their counterparts from those three countries in terms of basic skills (PREAL, 2009).

This is a key issue, as it impacts on the type of teaching professional that we wish to – and are able to – train, given the installed capacity of the region's education system, as well as the most effective strategies for achieving this.

Another difficulty with changing the vision of teaching in our countries relates to previous ways of extending the provision of initial teacher education programmes. As stated by Ávalos (2011), the considerable expansion of a mainly unregulated private sector and a surge in distance-learning initial teacher education courses stand in sharp contrast to the professional model presented as the ideal. The major atomization of initial teacher education provision and/or the various routes into teaching (even in the region's smaller countries) pose a difficulty in terms of coordinating and aligning the vision of teaching and the professional training to reflect that vision (as achieved by countries with concentrated and/or highly regulated provision).

In developed countries analysed, teacher professionalization goes beyond teacher status or salary. It is closely linked to the vision of teaching as a profession, the quality and rigour of teacher education courses and the involvement of the State as guarantor of this quality and the coherence of the model through control of course provision (as in Finland and Singapore) or through rigorous programme certification processes (as in Australia and some parts of the United States).

Although the experiences of Finland and Singapore show the State as controlling and providing all teacher education, this is not the case in most of the region's countries. The State should play the role of coordinating the various actors, visions and institutional spheres to achieve a shared, modern and valid vision of teaching in each country.

The evidence presented in this paper underlines the need to build agreements on the vision of teaching, and the fact that this task should fall to the State. Much of the success of teacher education policies in the countries considered lies in the building of social consensus about the professionals needed to build the education system to which a society aspires. For this to happen, there must be a debate on teacher professionalization in the region's countries, and teaching must be clearly defined as a job based on knowledge and specific skills (as well as a series of shared professional values and principles that requires the appropriate initial education).

Training institutions are not able to implement this change alone. The State must coordinate all social actors so that they can collectively formulate, discuss and approve what a teacher must know and be able to do upon graduation from initial education (in other words, national standards for initial teacher education). These standards must establish the principle of systemic coherence in a field with fragmented and heterogeneous visions of teacher knowledge and competences.

Based on national standards, the State's role as coordinator, regulator and promoter of the provision of teacher education programmes enables it to develop processes to assess graduates and gauge the quality of learning, as well as to certify programmes/graduates. The State can also introduce incentives for the provision of programmes that meet the demand and the standards, using grants and practice opportunities in accordance with established standards.

4.2 Characteristics of teacher education programmes

The current structure of teacher education policy in the region's countries (with a large number of diverse and heterogeneous programmes, a surge in distance learning as an alternative to expansion, the low number of full-time programmes and the poor preparation of students enrolling) makes it difficult to implement programmes of excellence similar to those in developed countries and described herein.

However, the agenda for initial teacher education in the region should make progress from the most formal to the more substantive aspects of such programmes. In other words, it is not enough to introduce the transition from secondary to higher education or to demand (in countries where training is at that level) that teachers have the legally established training. There is a need to review or change what happens within this new institutional setting (teacher training in higher education) in order to push through improvements to teacher education programmes.

Therefore, countries should be more explicit about the knowledge, know-how and competences that will guide their initial teacher education programmes. It is vital to go beyond general guidelines on the teacher's role and the division between subject-based and pedagogical knowledge, towards concepts of curricular cohesion and coherence. This discussion should be based on relevant scientific research and international success stories.

The theoretical debate and international experience show that programme-related and other factors should both be considered. Programme-related factors include its vision and purpose, curricular coherence and integration between theory and practice.

The capacity to implement the vision of teaching as a profession involves being able to develop coherent programmes (rather than just declaring this vision by law). Initial education programmes must therefore have the explicit purpose of training teachers for the schools of the 21st century. Although it sounds obvious, there is not enough agreement in education about which and how much training is needed to prepare teachers (and this is reflected in the heterogeneous nature of programmes in the region).

A coherent teacher education curriculum should be organized to impart the knowledge and know-how teachers need for a variety of specific and concrete contexts.

Beyond the differences between various authors presented herein, there is some convergence about which areas of knowledge are key for teaching: knowledge of pupils and their context, subject-based knowledge and professional/pedagogical knowledge. It is also worth emphasizing two integrations proposed by the authors: the combination between subject-based and pedagogical knowledge (pedagogical knowledge of content) and between course-based (conceptual) knowledge and know-how from practice ("savoir-faire" or "wisdom of practice").

Initial teacher education programmes must therefore have not only robust subject-based and pedagogical training, but also a connection between the two types of knowledge (or pedagogical content knowledge). This specific teacher knowledge can only be learned

from or during practice. Practice-based training involves learning, researching and applying this knowledge while preparing for teaching.

These key ideas shape the work of training institutions in the developed world. However, the scarce information on teacher education programmes in this region shows that this type of knowledge is not really been developed in the curricula of several countries. Furthermore, the teacher training students in the region's countries tend to be underprepared in secondary school in terms of curriculum subjects, which poses a greater challenge for them when it comes to developing the subject knowledge needed for teaching (namely in-depth subject-matter knowledge and the ability to make the relevant connections).

While many of the ideas advocated by the authors mentioned in this document certainly have influenced the development and reform of teacher education programmes in developed countries, they are relatively unknown in the region (while authors who criticize that vision of teacher education are more commonly cited by academics and researchers here). It is therefore vital to broaden our region's references in terms of teacher education to incorporate theories, analysis and studies that have inspired successful teacher education reform in the developed world, as well as research that assesses the characteristics of the reforms and the programmes involved.

Lastly, the experience of some developed countries shows that lengthy initial education programmes focused on the development of subject-based and pedagogical knowledge can coexist alongside short programmes (where graduates in a specific subject can learn the pedagogical knowledge they need), provided that there are standards for initial teacher education that form the basis for certification systems and examinations upon graduations.

4.3 Practice systems

The importance of practice in teacher education has gained ground in the official discourse, guidelines and curricular standards in the region. However, the actions of governments or programme providers have not always ensured that this system achieves the required level of quality.

International experiences show that it is not enough to make practice compulsory if: (1) it is not integrated to the programme curriculum; (2) it is not institutionalized throughout the educational system (namely in universities and schools alike); and (3) there is no clear support system involving trainers from universities and schools to ensure that practice is a learning opportunity for future teachers.

In this sense, the limitations on the development of a system of excellence for practice in the region relate to the above-mentioned characteristics of programmes in most countries (namely the range, number and atomization of programmes and the scale of distance learning and evening classes). This is because many of the characteristics highlighted in internationally renowned programmes and new theories are incompatible with this context.

Other factors that hamper the implementation of changes to this aspect of teacher education relate to the distance between teacher education systems and schools. This gap became wider as training was changed from normal schools to higher education (plus most countries in the region have no incentive for changing the situation). This is because schools of education in the region's universities of excellence are judged by academic criteria (such as the amount of research), and therefore are guided by this criterion when it comes to hiring new teachers/researchers or designing a curriculum. As for the vast majority of low quality institutions, they offer training courses with limited investment in human resources and time because they are allowed to do so by the national accreditation, regulation or supervision systems. This is unlike the picture for other professional trainings, such as medicine, which tend to be much more regulated.

In fact, a practice system in keeping with international standards and new theories would require a sea change in the region's current teacher education models. This would have a high political and financial cost, with few or limited results in the short term. Despite the consensus on the need to step up practice arrangements within programmes, the implementation of the necessary changes is hampered by circumstance.

First, countries must ensure the quality of the experience by taking care regarding the practice setting (field schools, professional development schools and other models) and the level of personal preparation involved in training (master teachers, supervisors and so on). Furthermore, programmes must be able to institutionalize the practice system in their curricula, which implies not only an institutional change but also an increase in technical, human and material resources.

Second, the debate on the practice system should focus as much on the time involved as on the organizational arrangements in the curriculum. More specifically, this refers to – *inter alia* – gradually increasing the intensity and complexity of practices throughout the course; diversifying pedagogies (clinical work, portfolio and performance assessment, analysis of teaching and learning, case studies, autobiographies and practice research); and the guarantee that future teachers will learn key competences.

This means that teacher education programmes must have a series of high-leverage practices (key practical knowledge for all teachers) to be developed during the training programme. These include how to organize and manage small group work and hold a meeting with a pupil's parents or guardians. With this in mind, countries' national standards should include clear guidelines on the set of practices needed for teacher education.

These issues and guidelines concerning initial teacher education show that there is a long way for Latin American and Caribbean countries to go in developing initial teacher education programmes and policies on a par with the world's more developed countries. The aim of this document was to present the international literature and a series of relevant experiences that can support countries on that path.

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Standards and initial teacher education

Lorena Meckes[6]

Introduction

This working document refers to one of the five key topics identified for the second phase of the UNESCO Regional Strategy on Teachers, and more specifically to standards in the context of initial teacher education.

This document hopes to bring categories of analysis and a prospective vision based on international experience to policy-making for the teaching profession in the region's countries. The international experiences reviewed included Latin America and the Caribbean and first world countries. An attempt has also been made to produce an analysis and identify the visions and issues at stake in terms of standards of initial training, as well as to tease out some policy guidelines.

This study focuses specifically on standards for teacher graduation, and for approving graduates' entry to the teaching profession (as these are the most relevant teaching standards for initial teacher training). Although some accreditation systems in training institutions use standards for the training process or academic standards (curricula, facilities, academics and professional practices), these have not been included in the review.

What are included are instances of "competence profiles", used to mean standards applied to what teachers must know and be able to do.

The methodology used is basically founded on the study of official documents from various countries and previous reviews of compared experiences on standards, teacher assessment and teacher quality assurance mechanisms at the national level. Previous international reviews that have been important in the drafting of this document include the following:

- The international report of the Teacher Education and Development Study in Mathematics (TEDS-M) of the International Association for the Evaluation of Educational Achievement (IEA), including a comparative study of quality assurance mechanisms for future teachers in participating countries (Tatto et al., 2012).

- OECD report on comparative experiences in the use of assessment to improve teaching, "Teachers for the 21st Century" (OECD, 2012).

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- Review of international experience in standards for qualified teachers and the initial certification of teachers by Lawrence Ingvarson for the Chilean National Council for Education (Ingvarson, 2013).
- The international study on teacher standards and skills by Education International and Oxfam Novib (Education International & Oxfam Novib, 2011).
- The international review of standards in teaching, learning and school leadership produced by CEPPE on behalf of OECD in the framework of the OECD/Mexico cooperation agreement to improve the quality of education in Mexican schools (CEPPE, OECD working document forthcoming).

Given the variety of information sources, there are not always data available on all topics for all countries. As a result, each section should not be expected to review each country mentioned systematically.

This document opens with a definition of standards that distinguishes content standards from performance ones, before examining how teacher standards are organized, the types of competences used in various countries and how these are assessed. Standard formulation processes are also analysed, with a special emphasis on the procedures used to involve various groups (and teachers in particular).

A model is then proposed on the basis of the three main uses for standards in initial teacher training: (i) accreditation of training institutions, (ii) certification of gradulates or those enrolling for the teaching career, and (iii) formulation of standards-based training programmes. These three elements form the basis for the international review and the diagnostic of the regional situation.

This document also identifies the main tensions and dilemmas from the following questions: Standards or homogenization of teacher training? Regulation of initial training curriculum or results? Regulation or autonomy? State or market? Pupils' rights to have well-trained teachers or the rights of new social groups to enter the professional world?

Lastly, there is an overview of the proposed features for a standards-based system to ensure the quality of teacher training, as well as the main implementation challenges for each standard.

1 Components of standards: what is valued, how is it assessed and what is the yardstick

This concept of standard refers to what must be known or be able to be done in a certain sphere (professional or educational) to be considered competent.

It is worth mentioning that standards and skills refer to similar concepts, insofar as both describe the performance needed to match an agreed level of quality. Standards are the term more commonly used in English-speaking countries (United States,

United Kingdom, Australia and New Zealand), while competences are used more in continental Europe, Canada and some Latin American countries. Both terms cover knowledge, attitude and the implementation thereof (Ávalos, 2005). The close link with the checking or assessment of achieving that knowledge or know-how is more apparent in the tradition of standards, which as shown below make explicit reference to a level or yardstick for attainment.

The etymology of standard relates to the banner behind which army ranks would congregate in battle (in order to enable soldiers to identify which side they were on).

The term is also used as a measurement or yardstick that must be achieved to meet a quality requirement. Both meanings are relevant for understanding professional standards for teaching. Standards can play the role of compass point by defining what is valued as good practice, as well as being used for professional decision-making and for indicating how far someone is from achieving the minimum level to be considered competent (which means they can be used as a measurement or yardstick). According to Kleinhenz & Ingvarson (2007), using standard in the latter sense requires a complete definition of teaching standards based on the following three standards (that can also be conceived of as development stages):

(1) *Standards as a definition of what is valued*, in that they define what a teacher must know and be able to do (in the literature on standards and their assessment, these are known as content standards),

(2) A definition of *how to assess them*, namely the rules for collecting evidence on standard attainment (type of task and assessment considered valid to judge attainment), and

(3) Standards as a yardstick, to indicate how well the teacher must perform and which characteristics must be demonstrated in the assessment (in the literature on standards and their assessment, these are known as performance standards).

The first element (standards as a definition of what is valued) specifies which practices are valued and which elements define the identity of the teaching profession. However, for a full definition of standards, they must also be used to establish if a teacher or teaching applicant fulfils this vision, in order to make decisions on the person's professional development or entry/continuation in the profession.

According to the above, standards cannot be considered fully developed if they do not clearly establish how performance will be judged.

Each element responds to different questions. Standards as a definition of what is valued in teaching responds to: what should teachers know and be able to do?; rules on collecting evidence on attaining standards respond to: how can we assess what they know and do?; and standards as a yardstick respond to the question: how well must a teacher perform (during assessment) to be considered acceptable or good enough?

Standards as a definition of valued teaching

Standards define what good teaching practice means and what it values, as well as determining the main areas and responsibilities that make up teaching. There are descriptions of what the standards mean in terms of teaching practice and knowledge. Generally speaking in the educational assessment sphere, standards define and outline the mastery of the person being assessed.

It is vital not to confuse content standards with conceptual knowledge standards. Content standards can (and in this case, must) include knowledge, "know-how", dispositions or values and teachers' being able "to do". For instance, standards usually indicate the conceptual knowledge that teachers should have in the subject(s) taught, about how students learn, the curriculum, learning assessment and planning methods and the profession's regulatory frameworks. It also includes descriptions of the ability to interact with students and create an environment conducive to learning, work in teams with other teachers, choose and use teaching strategies and assessment methods and review their own practice. It is also common for teaching standards to stipulate the values underlying the performance described and to mention the need for teacher commitment to the full development and learning of each student, as well as teachers' appreciation of continuing professional development.

Characteristics of well-defined standards

In order to be valid, standards should be based on evidence or research relating to the type of practice linked to student learning and development (which is the ultimate aim of teachers' endeavours). In other words, standards defining what is valued as good practice does not mean they can be formulated using just visions, approaches or opinions that bear little relation to research on successful teaching practices that promote learning. This is illustrated by the standards of the Interstate Teacher Assessment and Support Consortium (InTASC) in the United States, which have an introduction that outlines the basis for standards on educational research into cognition (the How People Learn report by Bransford, Brown and Cocking for the National Research Council, which focuses in particular on how people learn in specific subjects) and the research on the impact of assessment on learning (Black & William, 1998; Shepard, 2000, 2005), among others.[7]

Another condition of validity for standards is that they should accept a range of pedagogical styles and be applicable in a variety of educational contexts. Although standards seek to define what is considered good teaching practice, they should not prescribe or standardize the specific form that this takes. Teachers with different styles and specific strategies in the classroom can achieve the same set of standards.

For instance, the following extract from one standard (relating to the realm of teaching-learning) describes what is expected of students who have completed their teacher training in Scotland:

7 *Council of Chief State School Officers (2010, July). Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards: A Resource for State Dialogue (Draft for Public Comment).* Washington, DC.

2.1.3. By the end of the programme of initial teacher education, student teachers will:

(employ a range of teaching strategies and justify their approach):

- Demonstrate that they can select creative and imaginative strategies for teaching and learning appropriate to the subject, topic and pupils' needs.
- Demonstrate that they can use a range of teaching approaches and homework to reinforce and extend work in class.
- Demonstrate that they can select and use a wide variety of resources, including ICT and, where appropriate, the outdoor environment, in a considered way and in a number of different learning and teaching situations.
- Demonstrate the ability to teach individuals, groups and classes.
- Demonstrate the ability to evaluate and justify the approaches taken to learning and teaching and their impact on pupils.

In terms of this standard, one can imagine that teachers in different sociocultural contexts could demonstrate that they are achieving that performance. Furthermore, the standard stipulates the need for the teacher to respond appropriately to the context in a way that matches the students' needs.

How standards are assessed

The second element or stage in standard setting is deciding what type of assessment task will be considered valid for collecting evidence and deciding if standards are achieved. Examples of methods for collecting evidence on the attainment of standards include:

- Written tests or examinations
- Videos and class observation (in professional practice or during induction for new teachers)
- Written reflections on classroom observations or recordings
- Examples of pupil work over time, accompanied by the teacher's written reflections and the redesign of pedagogical strategies
- Annotated planning

- Simulations or case studies for teaching and learning, accompanied by essay or development questions
- Assessment by pupils using interviews or questionnaires
- Assessment by head teachers and peers to evaluate performance in the probation or induction period.

Depending on the standard in question, there is a range of different options for collecting evidence on attainment. The options include depth of knowledge of the subject and curriculum to be taught (which can be assessed through written tests or planning of a class on a given subject), while assessing skill in promoting an atmosphere conducive to learning in class involves practical situations or tasks, or classroom performance observation (live or on video). In contrast, commitment to students and teaching can be checked more suitably using reports on the teacher from pupils, colleagues or those supervising the person's school work (Ingvarson, 2009).

The assessment validity will depend on the level of authenticity of the tasks used to assess the standard. A combination of various forms of assessment is recommendable, including task portfolios including lesson planning, evaluation of pupil learning, response analysis and classroom videos. What is relevant is that the range of instruments used to assess standards should cover or sample the various dimensions in a valid way (Ingvarson, 2013).

Authentic tasks for assessing the attainment of standards collect evidence through exercises or situations that reflect the relevant moments in teaching practice. For instance, an appropriate task for assessing a mathematics teacher in primary school could be asking the person to use knowledge of common pupil mistakes to analyse the results of an assessment. The person is then asked to set suitable targets or next steps, before devising a plan and specific strategies (as well as proposing a way of assessing effectiveness). This shows that one task can be used to collect evidence on what the teacher should know and, above all, what the teacher should be able to do.

Generally speaking, comparative experiences show that basic skills and pedagogical and subject knowledge can be assessed through written tests such as the Praxis I and II tests implemented by the Educational Testing Service (ETS) in various American states, or the tests in Peru, Colombia and Chile at the end of initial training or upon joining the profession. In some cases, basic teaching competences are simply not assessed, or at least not externally assessed as in Chile, Peru and Mexico, or this is dealt with by schools when they assess students during professional practice or during probation/induction with the participation of head teachers and peers (New Zealand, United Kingdom, United States (Praxis III), Scotland, Australia, Colombia).

It should be pointed out that using standards-based assessment for students upon graduation does not mean that the assessment is external to training institutions. Several countries make graduation the ongoing responsibility of the training institution, although there are institutions to check certification processes (such as an oversight

or accreditation agency), and the institution must provide convincing evidence that its assessments are sufficiently robust and that they require standards to be met. This is the case in Australia, Scotland, England and New Zealand.

The type of assessment, the efforts to standardize it and the emphasis on procedures to control reliability will all depend on the consequences and use intended for the results of assessment. If standards and assessment are only to be used for diagnostic and formative purposes within schools, then it is less important to protect the confidentiality of tests before they are administered or double-blind practice observations to check that the application of categories or guidelines for performance observation is not related to the identity of the assessor. However, those procedures do become necessary when assessment has serious consequences (such as teacher accreditation to practice) or for a comparison of students graduating from different training institutes for research or accountability purposes.

Levels of attainment and standards as a yardstick

A complete definition of standards requires not only a definition of what good teaching or professional performance entails. It is also vital to establish how well a teacher or graduate must perform to consider the standard to be met. In other words, what level of performance in relation to standards is considered acceptable or good enough. While a framework of standards may describe what teachers should know and be able to do, this definition is incomplete if it fails to stipulate how this knowledge and know-how will be assessed, or if it does not clearly state how well teachers must perform to be considered competent in the sphere defined by the standards.

This can involve defining or describing a single level of achievement, giving rise to two categories of performance (standard achieved/not achieved), or describing increasing levels of mastery of the skill assessed (such as basic, competent and advanced/expert levels). The option chosen will depend on the use intended for performance standards. If the only aim is to distinguish between those who can be awarded a teaching permit and those who cannot, the first option may be sufficient.

In order to assess teaching practice in relation to standards, and to decide whether the latter have been achieved, it is vital to begin with a well-designed assessment that is aligned with the standards in question. Deciding whether those assessed measure up to the relevant yardstick involves establishing which score is the equivalent of achieving the standard – or defining the cut-off to distinguish those teachers who achieve the standard from those who do not. The cut-off score is the operational version of the description of the achievement level considered acceptable (which in turn is the conceptual version of the cut-off score).

In this perspective, it is clearly impossible to dissociate assessment standards from rules on deciding if they have been attained.

2 Content of standards or competence profiles

Content of standards or skills profiles, and the organization thereof, tend to be fairly similar despite differences among countries. The elements usually considered are the same for standards relating to practising teachers and those completing their initial training. The following table shows the elements included for graduates of teaching courses and for candidates for teacher registration for a selection of countries and States.

TABLE 1. CONTENT OF STANDARDS FOR GRADUATES OF TEACHING COURSES AND FOR CANDIDATES FOR TEACHER REGISTRATION FOR A SELECTION OF COUNTRIES AND STATES

	Au	Qb	Col	Ch	US Intasc	California US	Sco (1)	Sco (2)	Eng	NZ (1)	NZ (2)
Knowledge											
Subject knowledge (general terms)	x	x			x		x	x	x	x	x
Subject knowledge (specific terms)			x	x		x					
Knowledge of national standards and curriculum	x	x		x			x	x	x	x	
Knowledge of students and how they learn	x			x	x		x		x	x	x
Knowledge of requirements for developing cross-cutting and attitudinal skills	x						x	x		x	

	Au	Qb	Col	Ch	US Intasc	California US	Sco (1)	Sco (2)	Eng	NZ (1)	NZ (2)
Teaching practices											
Matching teaching to students in the light of context and while respecting diversity	x	x			x	x	x	x	x	x	x
Design and planning of teaching processes	x	x	x	x	x		x	x	x	x	x
Selection of resources, including ICTs	x	x	x	x	x			x			
Involves students and promotes their learning	x	x	x	x	x	x	x	x	x	x	x
Knows how to teach the subject	x	x	x		x					x	
High expectations and promotes complex cognitive skills	x		x		x		x	x	x	x	x
Promotion of personal and/ or citizen development		x	x	x	x				x	x	x
Suitable teaching environment	x	x		x	x	x	x	x	x		x
Values and/or incorporates the family and community	x	x	x	x					x	x	

	Au	Qb	Col	Ch	US Intasc	California US	Sco (1)	Sco (2)	Eng	NZ (1)	NZ (2)
Learning assessment	x	x	x	x	x	x	x	x	x	x	x
Effective working in a context of cultural diversity	x									x	x
Professional responsibilities											
Knowledge of educational system and policies				x			x	x			
Reflection on and basis for person's own practice	x	x		x	x	x	x	x	x	x	
Ethical commitment and commitment to pupils' learning	x	x		x	x		x	x	x	x	x
Commitment to own professional development	x	x			x	x	x	x	x		x
Active participation in the education community and in team work	x	x	x	x	x		x	x	x	x	x
Contribution to and mastery of administrative aspects	x		x	x							

Au: *Australia;* ***Qb:*** *Quebec,* ***Col:*** *Colombia (standards for assessing probation period);* ***Ch:*** *Chile (standards for graduates);* ***Sco(1):*** *Scotland (graduate standards);* ***Sco(2):*** *Scotland (standards for permanent registration);* ***Eng:*** *England;* ***NZ(1):*** *New Zealand (graduate standards);* ***NZ(2):*** *New Zealand (standards for registration).*

Organization of standards

Although not all standards or competence frameworks are organized into domains or areas of teacher quality or performance, most of those that do categorize standards follow two models. The Framework for Teaching by Charlotte Danielson (1996, 2007), which arose as a framework for observing teacher performance, has been hugely influential in: the definition of standards in the states of the United States, the definition of the first version of initial teacher education standards in Chile, and for the Framework for Good Teaching and Framework for Good Teacher Performance in Peru (2012).

The four domains in Danielson's framework are:

- ***Teaching preparation:*** the need for the future teacher to know the characteristics of the studens to be taught, to have a solid subject knowledge and pedagogical knowledge and to be able to plan learning units or sequences that include the assessment thereof.
- ***Creating a suitable teaching environment:*** ability to create a culture of learning and a climate of respect among pupils, as well as establishing consistent rules and routines and organizing the physical space.
- ***Instruction:*** the teacher's interaction with students to promote learning, ability to structure learning activities, use time effecitvely, apply question and feedback techniques to engage pupils and stimulate reflection and thought.
- ***Professional responsibilities:*** includes professional reflection and willingness to engage in continuing professional development, participation in and communication with the school community (including parents) and professional commitment.

The other most common form of organizing standards is based on the research of Darling-Hammond and Bransford (2005), which tackles three key questions on what novice teachers need to know and be able to do:

- What type of knowledge should a teacher have on his/her subject and the learning and development process of students in order to be effective?
- What type of skills or practices should he/she be capable of demonstrating in order to provide effective learning opportunities to students and improve them continuously?
- What professional commitment should he/she show to help all students progress and in order to continue developing as a professional and member of a profession?

This is the structure adopted for the standards for all stages of teaching in Australia, the Standard for Initial Teacher Education (SITE) in Scotland and the Standards for Full

Registration (SFR) for graduates in New Zealand (professional knowledge, practices, professional values and relations).[8] In the latter country, standards assessing the performance of new teachers following probation and before permanent registration only cover two domains: professional values and relationships; and knowledge in practice (integrating knowledge and professional practice). The same is true of teacher assessment standards during the probationary period in Colombia, which identify two areas: functional skills (including knowledge, planning, teaching, assessment, administrative support and promoting an educational community) and behavioural skills (including team work, communication ability and sensitivity to the needs of those with whom the teacher is interacting).

Perhaps that model's greatest advantage over Danielson's is that it clearly states an area of knowledge that new teachers need to master. This can be useful for assessments intended to evaluate that aspect, as it provides a larger sample than that obtained directly by assessing practical performance. In Chile, the lack of specifics on teachers' subject knowledge in the Framework for Good Teaching made it difficult for teachers to accept assessments of their level of knowledge, and it subsequently proved necessary to formulate specific standards for graduates of initial training that indicated the subject-based knowledge and knowledge on teaching the discipline that recent graduates were required to demonstrate. In Danielson's model, subject-based knowledge and pedagogical knowledge are included in practice domains (teaching preparation and instruction), such that evidence on the teacher's knowledge must be collected through his/her practice (in the form of samples of planning or classroom observations to assess the conceptual rigour of the subject teaching, for instance). This limits the assessment of the teacher's subject-based and pedagogical knowledge to the topic on which the portfolio has been prepared. While this approach may be suitable for appraising a teacher's practice, it may not be appropriate for checking if the teacher has the minimum level of knowledge on the subject and on the teaching of the subject at the end of training.

Lastly, some standards are simply presented as an unordered list with no domains or areas identified. This is the case of the eight standards that must be met by the teachers in British Columbia, Canada (Ministry of Education of British Columbia, 2012) or in the context of InTasc in the United States. England does not currently identify domains in its standards (although they did feature in a previous version). Argentina is another country that does not identify areas within the abilities that its teachers are expected to have at the end of initial training (according to the Curricular Guidelines for Initial Teacher Education).

Even when the elements within standards are organized differently, they tend to be fairly similar. This may be because standards are formulated based on a review of international experience, as explicitly stated in the teacher education document in Ecuador and the Framework for Good Teaching and standards for pedagogy course graduates in Chile. Alternatively, it could be because standards or skills frameworks refer precisely to key aspects and therefore remain context-free (Ingvarson, 2013).

8 http://archive.teacherscouncil.govt.nz/te/itefinal.stm#a1.

There are variations in the level of detail or drafting in the presentation of standards and the emphasis therein. Whereas most standards are fairly concise with a brief explanation (as in Colombia, New Zealand and British Columbia), others present long and specific descriptions and achievement indicators (such as the Guiding Standards for Graduates of Pedagogy Courses in Chile). In their comparison of the length of standards for initial training, Sotomayor and Gysling (2011) conclude:

> In Canada, it ranges from 6 standards in the state of Alberta, 8 in British Columbia, 9 in Ontario to 12 in the skills benchmark of Quebec. In the United States, there is a variety of definitions (and there are 10 InTASC standards). All of the cases mentioned feature summaries. In contrast, detailed descriptions include those in England (with 33 standards), although this has recently changed to a more concise 11 standards; and the recent formulation in New York that defines 7 standards (with 36 more specific ones)

The concern underlying the particularly brief or vague standards may be to give higher education institutions the space and autonomy they need, as well as facilitating consensus (Education International, 2011).

Generic and specific standards

Lastly, countries adopt separate definitions when it comes to deciding whether to develop specific standards for those teaching different subjects, school cycles or those at various stages of professional development. Most countries have defined general standards for teachers, without specifying the knowledge and performance requirements for teachers of different subject or distinguishing between novice and expert teachers. Developing standards for teachers graduating from initial training would be a particular example of specific standards.

It is clear that what secondary teachers need to know about their students (youth culture and adolescence) is very different from what a nursery teacher needs to know. There is also a marked difference in the knowledge for teaching science at primary and secondary levels. The requirements for a newly qualified teacher are again different from those for teachers seeking special recognition in their career, for instance. In order for standards to be useful for guiding training and for assessment, they need to be specific (Louden, 2000).

An analysis of specific standards developed for the end of initial training and the beginning of professional practice reveals that standards for graduates place greater emphasis on pedagogical and subject-based knowledge, while standards for the induction period (or for permanent teacher registration) focus more on the ability to put knowledge into practice through teaching. This is demonstrated by a comparison of the two levels

(graduate and proficient) in the Australian standards (Annex 1), and in levels 1 and 2 of the standards being developed by the Argentine Project to Improve Initial Training for Secondary Teachers (Annex 2). Standards have also been developed to specify the subject-based and pedagogical knowledge that teachers must demonstrate to teach different subjects (see examples in Annexes 2 and 5).

As shown below, avoiding an uncoordinated proliferation of standards makes it advisable to begin by defining a generic framework of standards that can be used to devise more specific standards (by subject, school cycle or stage of teaching career) based on the same categories. This ensures that the link and coherence between the standards is clear for teachers.

3 Who has developed teacher standards and in what way?

Almost all the literature on standards tends to recommend developing them through participatory processes involving all interested parties. Standards for teachers are no exception. According to the recent OECD report on teacher assessment:

> "for teaching standards to be relevant and adopted by the profession, it is essential that teachers assume a lead role in developing them […] Teachers will be more open to being evaluated if they are consulted in the process. Hence, there is a need for designers of any appraisal system to work hand in hand with teachers' unions, teachers' professional organisations and outstanding teachers from across the system" (OECD, 2012, p. 26).

The quotation gives a range of options from being consulted on standards to leading the process. The growing use of standards to regulate initial training and to ensure quality of the teaching workforce is the initiative of central or State government agencies, rather than being instigated by professional teaching organizations. In several countries, this is why teacher standards began as initiatives by professional teacher associations for specific subjects (such as the United States National Council of Teachers of Mathematics (NCTM) or the Australian Science Teachers Association (ASTA)). These have gradually resulted in national or State standards established or recommended by government agencies responsible for ensuring the quality of initial training or assessing the performance of teachers throughout their career.

In Australia, for instance, the Australian Institute for Teaching and School Leadership (AISTL) was founded by the Ministry of Education in 2010 to establish standards for the various stages of professional development in all of the country's states and territories. In Chile, the Ministry of Education tasked two university research centres with organizing processes to develop standards for graduates of pedagogy courses involving initial

training.[9] In Colombia, the Ministry of Education's Subdirectorate for Benchmarks and Assessment of Educational Quality sets the national teaching skills to be assessed at the end of probation. In Argentina, the Curricular Guidelines for Initial Teacher Education and teachers' abilities defined therein were drafted by the National Institute for Teacher Educaction, which is a Ministry of Education agency specialized in teacher education matters.

Danielson (2011) cited the National Board for Professional Teaching Standards (NBPTS) in the United States (which awards advanced certification to teachers in various teaching specialties) as an exceptional case in which the formulation of standards and teacher assessment is mainly led by teachers advised by assessment experts.

Regardless of whether the formulation of standards has been led or organized by central government institutions, most involve fairly broad processes of participation and consultation with teachers and training institutions.

When standards are produced by training institutions, which then assess themselves or provide evidence for attainment, this can promote improvement processes (Zuzovsky & Libman, 2006). If the ultimate aim of teacher standards is to raise the prestige of the profession by defining appropriate professional performance and establishing mechanisms for achieving that performance, then it is vitally important for teachers themselves to back standards and ideally the resulting certification systems (thereby guaranteeing teacher quality to governments and employers) (Ingvarson, forthcoming).

Although most standards go through a consultation process, the reports on such consultations (including the most consensual and discussed aspects, as well as amendments made) are less likely to be made public.

In this regard, it is worth mentioning the experiences of Australia and New Zealand. There have been broad consultations on national Australian standards. They were initially the subject of a mass consultation in the form of an online survey involving 6,000 teachers, combined with focus groups.[10] Specific institutions were then consulted in 2010. This involved teacher associations for various subjects, independent school associations, head teachers, parents, teacher unions and others (AISTL, 2010). In 2011, this consultation on standards was supplemented by a series of pilot projects involving the authorities of various States and initial and ongoing training institutions to identify requirements for implementing the standards. In terms of initial training, the generation of collaborative relations with mentor teachers in the run-up to teacher registration was highlighted as important.[11] For all three consultation processes, AISTL published reports of the outcome, reports from associations providing feedback and the conclusions reached.

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9 *For background on the Guiding Standards for Graduates of Pedagogy Courses in Chile, see http://www.cpeip.cl/usuarios/cpeip/File/2012%20ppt%20sandra/Mas%20antecedentes%20estandares.pdf (accessed in March 2012).*

10 *http://www.teacherstandards.aitsl.edu.au/Static/docs/submissions/Executive_Summary_-_The_Standards_Validation_Report_202010.pdf.*

11 *http://www.teacherstandards.aitsl.edu.au/Pilots.*

There was a similar process in New Zealand, where standards for assessing teachers at the end of probation were the subject of a consultation in the form of mass surveys in 2007, before being the subject of a pilot programme in 2009. The purpose of the pilot was to:

- Assess the extent to which the criteria provide a valid and useful framework to guide professional learning and development of teachers
- Assess the extent to which the criteria provide a useful framework for assessing teachers
- Assess the extent to which the criteria are context-free and applicable to diverse situations in New Zealand.[12]

In the case of New Zealand, standards for graduates were developed by the New Zealand Teachers Council (NZTC) with the cooperation and support of a wide range of community representatives. The New Zealand Institute of Education played a major role.

Although Peru's Framework for Good Teacher Performance does not contain specific standards for graduates of initial training, they did result from a process of dialogue and agreement spanning more than two years under the leadership of the National Education Council and the Education Forum through the Inter-institutional Roundtable on Good Teacher Performance. According to the official document, the process actively involved citizens, teachers, experts, teacher representatives, families, academic institutions and technical cooperation agencies (Ministry of Education of Peru, 2012). The same is true of the document on teacher standards in Ecuador, which states that the standards were the subject of consultation with education system stakeholders (managers, head teachers, deans, teachers, parents and students), academics, technical officials and experts on education (Ministry of Education of Ecuador, 2011, p. 8). In Chile, the Framework for Good Teaching regulates practising teachers and was devised with the help of the College of Teachers, with the first version of initial training standards and the current Guiding Standards for Graduates of Pedagogy Courses both formulated with the help of training academics from various institutions before being the subject of a nationwide consultation. However, none of these Latin American and Caribbean countries published reports on the consultations or the specific amendments made as a result.

4 A standards-based system for ensuring the quality of training for teachers entering the profession

Although teacher standards do play a role in quality assurance and professional development of teachers throughout their careers, this review has concentrated only on

12 *http://archive.teacherscouncil.govt.nz/research/dimensions/rtchandbook.stm#h3.*

those that are more closely linked (or may impact) initial training. More specifically, this refers to standards for graduates of initial training and their permanent registration as teachers following a probationary or induction period.

There are two types of such standards: (a) those linked to training institutions; and (b) those related to individual certification or qualification (future or novice teachers).

For teacher education institutions, standards (as definitions of the competences they expect from graduates with no instructions for how to achieve them) provide guidelines for organizing the training process coherently in order to aim at imparting those comptences. From the viewpoint of quality assurance for initial teacher education, standards offer a framework for assessing the processes involved in the light of the desired results.

From the perspective of those graduating from initial teacher education, standards are used for their certification in the form of assessment processes that are either external or internal to institutions and overseen by accrediting agencies or bodies that regulate initial teacher education.

In several first-world countries (Australia, Chinese Taipei, Ireland, New Zealand and most American states) as well as some Latin American and Caribbean countries (such as Colombia), there is an additional step for permanent registration or qualification of teachers that only takes place following a probation period after which the teacher is assessed in the field. This encourages a more comprehensive assessment of their practical competences. Teacher registration is not necessarily for life. In several countries, registration must be periodically renewed (every five years in Australia, for instance).

According to Ferrer (2009), in the context of learning standards, having standards is not the same as having a standards-based policy or system. Ingvarson (2013) states that a standards-based initial teacher education "system" has the following elements:

1. Standards describing what novice teachers must know and be able to do as a result of their training (which provides guidance for training)

2. Coherent professional training programmes in which each course makes some contribution to the development of standards, and in which all standards are covered by programmes

3. Accreditation of teacher education programmes is led by an independent agency based on reliable and valid evidence that graduates are achieving the standards for permanent registration and certification as teachers

4. Graduation or permanent registration/certification is based on assessing attainment of standards using a comprehensive series of tasks and performance assessments to provide valid and reliable evidence that all standards are being achieved.

None of the components alone will have the same impact as all four combined. This combination may be achieved more easily if the same institution handles accreditation

of institutions and the accreditation of future teachers (as is the case for the General Teaching Council for Scotland).

Below is a more detailed description of both aspects of the main uses of initial training standards in terms of public policy.

5 Use of standards for the accreditation of education programmes

Robust accreditation systems for initial teacher education are characterized by being the responsibility of independent agencies with the authority to set consequences for teacher education institutions that do not achieve the required quality standards. The comparative study by Ingvarson, Schwille, Rowley, Tatto, Senk and Peck (forthcoming) on policies and regulations for initial teacher education in countries that applied the TEDS-M test showed that the countries with the best results (Chinese Taipei, Canada and the Russian Federation) had robust quality-assurance mechanisms at all such levels. In countries with the most robust systems, accreditation was the responsibility of independent bodies with wide powers to close down courses that were not achieving the required quality standards.

There is scant research into the effect of course accreditation for initial teacher education, although some studies have linked programme accreditation with the results of graduates as teaching candidates or practising teachers. In the United States, a correlation has been found between the accreditation of institutions and the quality of graduate teachers (measured using the certification tests at the end of the teaching course or during professional practice) (Darling-Hammond, 2000; Gitomer, Latham & Ziomek, 1999). These studies have shown a positive correlation between the percentage of accredited courses and teaching performance at state level (Darling-Hammond, 2000). Having controlled for course entry characteristics, a greater proportion of students from courses accredited by the National Council for Accreditation of Teacher Education were found to have taken the state examination for teacher certification (Gitomer et al., 1999). This relationship is probably due to the fact that the accreditation system analysed in the research (NCATE) specializes in teacher education courses and is based on quality criteria and standards that relate specifically to such degrees and have been identified as relevant to teacher education. In contrast, the Chilean study on the link between course accreditation status and graduate results in external examinations at the end of training found little or no relationship between the two indicators (Domínguez et al., 2013). Unlike NCATE, accreditation in Chile places little focus on training outcomes and the characteristics of quality initial teacher education. It is therefore unsurprising that the accreditation indicators and final examination results there bear little relation.

In the first world, the accreditation of training institutions is increasingly shifting its focus from inputs and processes to outcomes (such as the performance and knowledge that programme graduates must demonstrate) (Ingvarson et al., 2006; Rothstein et al., 2009; Eurypedia).

For instance, the criteria for training programme accreditation of the National Council for the Accreditation of Teacher Education (NCATE) in the United States state that the institutions must ensure that a certain minimum percentage of graduates pass the state qualification examination, in order to demonstrate that their graduates meet the required standards. The specific standard on subject-based knowledge in the acceptable accreditation category stipulates that at least 80% of those completing the initial training programme must pass state examinations where these are necessary to practise the profession.

In New Zealand, since 2008 initial training institutions undergoing accreditation must provide reliable evidence that pedagogy students will meet national standards for graduates. Similarly in England, official requirements for the accreditation of course providers established by the Training and Development Agency for Schools (TDA) demand assurance and evidence concerning rigorous benchmarking processes for assessments of future teachers, in order to ensure that assessments are reliable and consistent with standards for Qualified Teacher Status. According to the requirements, institutions seeking accreditation must also provide evidence that their programme and each course contribute to the achievement of standards for attaining Qualified Teacher Status. Only accredited institutions receive State financial assistance and may present candidates for Qualified Teacher Status.[13] The same applies to accreditation processes in Scotland and Australia. Australian course accreditation requires linking the course with graduate standards, while every student assessment must state which standards are being evaluated. In Queensland, the state body for accreditation (Queensland College of Teachers) has organized activities to moderate the assessments of the state's various training programmes to ensure a similar level of requirements in student assessment.[14]

In all of the above examples, there is a link and coordination between quality control for training processes and their results. In these cases, graduate standards provide a relevant framework for accreditation and for system coherence.

In Latin America, the link between accreditation and standards/skills expected of graduates from initial training institutions tends to be more tenuous in cases for which information was available, In Peru, for instance, accreditation of training institutions is a fairly recent phenomenon and, while assessment criteria do include an outcome related dimension, they refer to the institution's capacity to monitor graduates in order to provide information on their work experience, development and employment service (CONEACES, 2008). The current lack of reference to achieving standards is probably due to the fact that the latter were produced after the publication of accreditation criteria. In Chile, although accreditation of pedagogy courses is compulsory, here also the accreditation criteria only demand a graduate profile and for training processes to be coherent with that (with no link with achieving the standards laid out in the Framework for Good Teaching or current Standards for Graduates of Pedagogy Courses) (Domínguez & Meckes, 2011). There is also no link between the qualification resulting

13 *http://webarchive.nationalarchives.gov.uk/20120203163341/http://www.tda.gov.uk/training-provider/itt/accreditation/secretary-of-state-criteria.aspx.*

14 *Source: presentation by Dr. Kerryn McCluskey at an international seminar – Trilateral Andean Project for Institutional Strengthening of Higher Education, Santiago, Chile, 6 to 9 May 2013.*

from accreditation and the results of course graduates in national final examinations (Domínguez et al., 2012).

6 Use for the certification of future teachers

In terms of the use of standards for the certification of teachers towards the end of their studies and the beginning of their professional career, it is vital to mention the two points at which various countries assess teachers:

(i) Graduation or provisional entry into the profession.

(ii) Assessment of probationary period leading to more permanent registration or entry into the teaching profession.

The above depends on countries' requirements for qualification and teachers' entry into the profession. At both points, the assessment underlying the decision taken on individuals may or may not be based on standards.

The TEDS-M international study[15] proposed three categories for quality assurance policies regarding teachers, and in terms of regulating entry into the profession. A distinction was made between (a) countries participating in the study that had limited regulation of entry into the profession, and where graduating from a training institute was enough to enter the profession (Botswana, Chile, Spain (to teach in private education), Russian Federation, Georgia, Norway, Malaysia, Poland, Singapore, Thailand); (b) countries that demand external assessment to be awarded qualification and/or get a teaching job (Ontario-Canada; Oman, Philippines and Spain for public schools); and (c) countries that also required passing a probationary period in order to achieve permanent registration, such as Germany, Chinese Taipei and United States (Tatto et al, 2012, p. 49). The third category can also cover countries that did not take part in TEDS-M, such as Australia, Scotland,[16] France, New Zealand and the Netherlands, as they also evaluate teachers during probation using assessment based on specific benchmarks or standards (OECD, 2012).

The consequences of failing the assessment typically include an extension of the probationary period, plus more performance assessment and compulsory referral to training bodies – which could ultimately lead to a suspension from employment, as in Australia, Canada, Northern Ireland and Switzerland (OECD, 2012 p. 66).

In Scotland, the Standards for Initial Teacher Education (SITE) (see Annex 3) govern provisional registration, and are different from the Standards for Full Registration (SFR).

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15 *Teacher Education and Development Study in Mathematics.*

16 *For Scotland, information on specific standards for the probation period were from the website for the General Teaching Standards for Scotland, rather than the 2012 OECD document.*

In New Zealand, there are different standards for graduation and for official teacher registration (Registered Teacher Criteria). Australia also has specific standards for graduation from initial training, as well as standards for teacher registration following a probation period (Proficient Standards).

In contrast, in 2013 England stopped differentiating between a set of standards for registration as a qualified teacher and another set for practising teachers – opting instead for a simplified model of eight standards and conduct guidelines to be applied with differing levels of requirement at various stages (according to the opinion of the assessor and what can be reasonably expected at each stage, with more of the decisions left up to head teachers) (Department for Education, 2012).

Underlying this provisional certification policy is the idea that a recently graduated teacher cannot yet fully demonstrate (and has probably not yet acquired) all the competences needed to be a teacher. These abilities can only be developed and expressed following a longer period of professional practice than that generally provided for during initial training.

In summary, international experience shows that countries with strong quality assurance policies for teachers entering the systems introduce regulations on the end of training or graduation and/or registration following probation.[17] However, these requirements and assessments do not always relate to specific standards.

When assessments and decisions are based on standards, there are two models: one that refers to a set of generic standards applicable to teachers at various stages of their career (as in England's recent simplification on standards); and another with different standards that must be met to graduate/enter the profession or to register as an official teacher (as in Scotland, Australia and New Zealand). In any event, it can be argued that a set of standards to use as a benchmark for such decisions provides an organized framework for the competences worth improving throughout a career, as well as lending substance to professional teaching careers within a country.

In the region's countries, there is varied experience in terms of using standards for deciding on graduation and entry into the profession (which can be broken down into three situations):

1. Graduating from higher education provides the qualification. This is even the case in countries that have introduced standards or competence profiles for the completion of initial training (but they are not used to decide on entry into the profession). This applies to Chile and Brazil, where the graduation tests (INICIA and ENADE, respectively) are optional.

2. There are formal and external assessments to decide on graduation or entry into the profession, but these are not based on explicit standards or skills profiles. For instance, Mexico's recently introduced compulsory examinations to secure a place, or the entry tests for public teachers in Peru, do not refer to teaching

17 *Those countries that achieve good student results with no regulation in these areas (such as Singapore and Malaysia) have even stricter regulations concerning access to pedagogy pathways (as well as rigorous accreditation systems).*

standards (although both countries do have such more or less formal standards). The same applies to provisional registration in Colombia, with the Colombian Institute for Education Assessment (ICFES) organizing tests that must be passed but that do not make explicit reference to standards or competence profiles.

3. There are formal and external assessments to decide on graduation or entry into the profession, and these are based on explicit national standards or skills profiles. The only identified case in the region is Colombia, and this refers to assessment of the probationary period (see Annex 6 for the definition of skills to be assessed during the induction period).

The three above-mentioned situations reflect different levels of regulation of entry into the profession and the use of standards therein.

The following table shows the situation of some of the region's countries with information available:

TABLE 2. USE OF STANDARDS IN DECISIONS ON ENTRY TO THE TEACHING PROFESSION IN SOME OF THE REGION'S COUNTRIES

	Regulation of graduation or provisional registration	Regulation of entry into the profession
Requirements based on specific standards that are assessed		Colombia
Requirements and assessments but with not reference to specific standards or skills profiles	Colombia, El Salvador	Mexico Peru
Graduation from training institutions confers the qualification, with or without set graduation standards	Chile Brazil	

Source: Produced by the author on the basis of information from each country analysed.

Explicit and de facto standards

Interestingly, irrespective of whether there are vague or consensual definitions on what constitutes quality teaching practice or a graduate of initial teacher education that meets the education system's requirements, there do tend to be implicit definitions that act as de facto standards. For instance, Mexico has no official definition on teaching standards, but pupil learning and application (measured through a national test – ENLACE) has become a definition for teacher quality as it is the main benchmark for assessing and rewarding practising teachers. The same is true of competitive examinations to secure

places. Tables of requirements or content assessed by the examinations (intellectual abilities, content of study programmes including school learning standards and didactic knowledge) become the implicit standards for entering the profession (Barrera & Myers, 2011). Chile, in contrast, has adopted standards for initial teacher education relating to teaching practice and knowledge, although the national graduation examination only assesses subject-based and pedagogical knowledge using a written test. If this assessment did become compulsory for entering the teaching profession, only the knowledge of future teachers (rather than the document's other explicit elements) would be the de facto standards for being hired in the school system.

7 Tensions identified and the challenges of implementation

This section mainly presents the tensions and differing visions on the introduction of standards to regulate initial training or entry into the profession, as well as the difficulties in developing and implementing a standards-based initial training system.

Connotations of the term "standard"

In the region's countries, the word "standard" itself inspires rejection as it suggests standardization and attempts to control and homogenize the profession and practice. More specifically in the field of initial training, it is feared that standards would reduce the autonomy of training institutions (which would reduce diversity). As a result of the etymology of the word "standard" and its connotations, it is also associated with the subordination of education to private interests, economic arguments or being assimilated into industrial output dynamics (Casassus, 2010).

Barrera and Myers (2011) have highlighted the connotations of the word "standard" and the repercussions for its acceptance in the field. As stated previously, the authors found that the term derives from the "standard" borne as a flag, but is strongly associated with the industrial definition of minimum quality characteristics of a result, product or process that must be guaranteed:

> *The concept of standards relating to uniformity, interchangeability and control (through certification of the product and also the process) clearly clashes with the vision of education as a complex, contextualized and varied process that cannot be reduced, simplified or universalized. This is part of a more general criticism that questions applying an industrial and strictly economic framework to education systems, as it implies a dehumanization of the educational process by considering the school as a business, teaching as a production process, the teacher as a machine processing the raw materials and pupils as inputs and outputs of the process (with the latter also being interchangeable). (p. 10)*

This was also the finding of the comparative study on teaching competences in relation to the term "competences" in the two Latin American countries where case studies were carried out (Brazil and Chile). According to the study, in Chile there was a resistance to the term "teaching competence", which was associated with a market-based ideology. Despite the definition including values and attitudes, it tends to be interpreted in its more limited sense of specific conduct and observable skills. Although there were national definition of what graduate or practising teachers should know and be able to do (expressed in Curricular Guidelines in Brazil and the Framework for Good Teaching in Chile), the study's interviewees refused to consider them as competence profiles (Education International and Oxfam Novib, 2011).

In addition, the phonetic similarity between "standard" and "standardized assessment" has also contributed to confusion and rejection of that term. Standardized assessment is any assessment whose application arrangements (time, instructions and so on) and instruments remain the same for different assessment subjects and groups (in order to ensure comparisons are reliable). It is also used when the assessment is used to take decisions that have serious consequences for individuals or institutions. The criticism of standardized tests (particularly written ones) has therefore been extended to standards, despite the fact that standards-based teacher assessment may or may not be carried out using a standardized method. For instance, a head teacher's assessment of teacher performance may refer to teaching standards, without necessarily following a uniform or standardized procedure (or involving any tests).

Although some of the rejection may be down to semantic confusion (owing to the close link between standards and assessment), it is worth flagging up the need to check the validity of assessment methods and the coverage of all standards to avoid the well-documented unwanted side effects of narrowing the curriculum when high-stake assessments concentrate on a limited set of skills or areas (often due to the cost and complexity of introducing more comprehensive assessment systems). In the case of initial teacher education, the risk of high-stake assessments not fully covering the standards (for instance by focusing only on declarative knowledge) could encourage training institutions to ignore practical training – which has proved to be a crucial predictor of subsequent performance (Boyd et al., 2009, Brouwer & Korthagen, 2005; Darling Hammond, 2006).

Pupils' right to a quality education versus the right of new social groups to enter the professions

In the region's countries, the introduction of standards and the requirement for them to be met by those completing initial training clash with the growing demand for tertiary education among new generations (as well as other interests, market forces and the expansion of private provision).

The expansion of secondary education has led to increased pressure from new social groups to access higher education, and this pressure tends to be even greater for teaching

courses (which have traditionally represented paths to social mobility).[18] In practice, the serious quality and equity challenges within the region's secondary education result in the learning standards achieving by aspiring trainee teachers being well below those required to use the training appropriately or achieve the graduation standards upon completion. Thus, ensuring standards are achieved at the end of initial training clashes with the aspirations that those social groups have of entering the professions.

In addition, introducing assessment that leads to qualification based on the fulfilment of standards also threatens the interests of initial training institutions, especially in Brazil and Chile where the private sector has a large presence and has increased its provision to meet rising demand.[19]

The formulation of graduation standards (and an assessment system based on the latter) is a commitment to the quality of the professionals who will teach future generations, and prioritizes the right of pupils to have well-trained teachers over market pressures or social demand to access higher education through teacher education. Introducing entry standards and/or regulating the quality of initial training through strict accreditation or oversight mechanisms is vital to prevent the cost of guaranteed well-trained teachers for future generations being paid by the students of courses when it is too late (namely when it comes to qualifying or attempting to enter the profession).

Regulation of the curriculum or results of initial education?

A comparison of the experiences of the region's countries reveals two approaches to regulating teacher education. Some countries have developed curricular guidelines (such as Argentina, Brazil, Colombia, Guatemala and Peru), while others have developed a national teacher education curriculum (as in Mexico). These curricular guidelines are usually fairly specific, such as in Argentina where they stipulate the proportion of general training (25% to 35%), specific training (50% to 60%) and professional practice (25% to 15%).

In these countries, the focus of regulation is the curriculum (owing to the fact that training institutions approve their own) (UNESCO, 2012).[20] The underlying intention is that aligning their curriculum with set guidelines will increase the probability of achieving good results.

One alternative (or additional) option is to use results-based regulation by formulating skills profiles or graduation standards tested by assessing those completing initial training or entering the profession. The results-based approach enables institutions to set a range of curricula, thus providing them with more autonomy (provided that

18 *Teaching as the preferred way of accessing the professions is nothing new, and was observed in England at the end of the 20th century. It has been sociologically explained as teachers being the professionals with whom the most people have had the closest contact.*

19 *In Brazil, 68% of teaching enrolment is for private institutions (UNESCO, 2012). In Chile, the surge in teacher training from 2002 was mainly due to the growth in private provision (with a six-fold increase in private enrolment between 2002 and 2011, while enrolment merely doubled in State or traditional institutions) (Cox et al., 2011).*

20 *This does not prevent those countries from also developing standards for students of teaching. Argentina, for instance, is considering the formulation of standards in its Development Plan.*

their graduates demonstrate that they are well trained on the basis of clearly defined competence profiles or standards). This results-based approach is at an early stage in the region. In 2011, English-speaking Caribbean countries developed a framework for standards for different stages and levels of the professional career, including entry into the profession. Chile has recently introduced specific standards for teaching course graduates and a related examination (2011). In Chile, the dilemma between prescribing curriculum content and establishing outcome requirements (graduate standards) was resolved in favour of the latter. Despite the fact that the coalition government prior to 2010 had recommended that standards be accompanied by curricular guidelines, these were never published by the new authorities (as they were more ideologically cautious of State regulation policies, especially in terms of process control).

Neither of these emerging national situations forms the basis for compulsory assessment leading to qualification. In countries where teachers must be assessed in order to gain provisional or permanent positions (as in Mexico, Peru, Colombia and El Salvador), the subjects of the tests operate as de facto standards.[21] The subject of an examination is undoubtedly less prescriptive and emblematic than a well-defined set of standards adopted by the profession.

In the first world, the most illustrative example of this shift from regulation through the training curriculum to a results-based approach is England. In 2002 (Sotomayor & Gysling, 2011), the country abandoned the idea of a single curriculum in favour of defining standards for awarding Qualified Teacher Status (QTS).

8 Challenges of developing and implementing standards for initial teacher education

The first part of this document outlined an ideal coordinated model based on standards for graduates and for entering the teaching profession – one that would ensure the training quality of those who will work as teachers. This model or system requires four components (Ingvarson, 2013): (i) formulation of the standards themselves, (ii) their use to guide initial teacher education programmes, (iii) their use in the accreditation of training institutions, and lastly (iv) their use to make decisions about the graduation or admission of new teachers into the system.

Each component has its own challenges for implementation.

Challenges of formulating standards

First, the formulation of standards for graduates of initial training and their permanent teacher registration following a probation or induction period needs to be harmoniously linked to or developed from standards for practising teachers if these exist. This ensures

21 *In Colombia however, the assessment of the probation period (which must be passed to obtain a permanent position) does have a framework of well-defined skills as an assessment benchmark. The same does not apply to the examination organized by ICFES at the end of higher education (in which the explicit benchmark is the contents of the test).*

that teachers can visualize their progression in terms of professional development. Before developing specific standards for various stages of careers or for teachers in different subjects, it is advisable to have a generic framework of standards of teaching content that can be used to formulate standards for stages (provisional registration, permanent registration, experienced teacher and leader) or specific subjects.

All the uses mentioned have great potential to increase the prestige of the profession and improve the quality of training. However, ensuring that standards and assessment fulfil a training purpose requires standard descriptions or formulations to be clear and precise enough to convey what teachers completing initial training or probation are expected to know and be able to do.

Formulating standards involves not only technical challenges but also political ones, in terms of participation and the generation of consensus (particularly when standards will clearly be used in high-stake assessments). The involvement of teacher associations, training institutions and academics, interest groups such as associations of head teachers, area managers and their supervisors is essential, and is the case for most processes of standards drafting in the comparative first world and regional experiences of making progress in this regard.

The challenge of using standards to guide training processes

The existence of sufficiently explicit standards does not necessarily involve using them to ***guide training processes***. Unlike curricular guidelines in some countries (Argentina, Brazil) or the academic standards being proposed in others (English-speaking Caribbean), standards for teacher certification do not detail the training process used to achieve them. Standards establish the subject-based and pedagogical competences that graduates must demonstrate upon completing their training in order to achieve quality learning experiences. Standards do not, however, state which learning opportunities can develop these skills in students of teaching. This is the challenge of linking the outcome with the process. It requires a deliberate effort on the part of training institutions to analyse and change processes within curricula and each course, which in turn requires investment of time and additional resources if standards are expected to have a transformative effect. One example of a programme specifically devised to support transformation processes in teacher education institutions is the organization of performance agreements in Chile, in which the government allocates funds for a development project in which a commitment is made in terms of indicators and results.

Technical requirements for assessing achievement of standards

Another major challenge is having ***valid and rigorous assessments*** of the achievement of standards, particularly if the results are used to decide on graduation or entry into the profession. Standards cover a range of scales that are not limited to the subject-based and pedagogical knowledge of new teachers. However, probably due to the complexity of using other procedures such as portfolios and classroom observation, the type of assessment is limited to those aspects. Examples include the INICIA tests in Chile

(measuring subject-based and pedagogical knowledge), knowledge-based examinations in Mexico, entry tests for teaching in Peru and ICFES tests for provisional registration in Colombia. Although these tests are certainly one way of checking a key dimension of teaching competences as referenced in standards (namely, knowledge), they are not effectively assessed in practice.

The region's only example of assessing practical performance is in Colombia, where such appraisal is a requirement for passing probation. However, the assessment is carried out by the head teacher, and there is no evidence that procedures are applied to check the reliability of criteria use (such as using various examiners and estimating the level of agreement in their assessments). This is relevant because, despite the fact that a performance assessment based on observation by a new teacher's principal or mentor is more valid to assess practice, it can be discredited or become a mere formality if the reliability of assessment is not also properly considered.

In conclusion, it is vital for teacher assessment at the end of training to combine sufficient rigorous evidence on knowledge, as well as practical abilities.

Use of standards for accreditation

The use of standards for graduation and in terms of evidence of standard attainment in accreditation processes is crucial if standards are to have an impact on training. If a system merely introduces rigorous certification processes for those completing initial training or applying for teacher registration (without assessing the training institutions involves), there is a risk of individuals undergoing weak training processes that are not subject to coherent quality regulations. None of the region's countries under consideration presented evidence that the results of training institutions were considered as achieving standards or competence profiles, or that institutions provided proof that graduates achieved such standards. Generally speaking, gathering and checking evidence on training processes and learning assessments is more costly than checking basic operational conditions such as facilities, libraries or academic credentials. For this reason, it is not enough to match courses to standards or for student attainment of standards to become part of the criteria for checking accreditation processes. It is necessary to establish procedures and install capacity for peer assessors to collect information on such aspects.

9 Criteria and guidelines for policies on initial teacher education standards

On the basis of the above review, the following policy guidelines and criteria for the formulation and use of initial teacher education standards are put forward to be used by countries.

9.1. Setting standards should be part of a comprehensive quality assurance policy for the training of practising teachers

The formulation and use of standards for graduates of initial teacher education should not be an isolated strategy. Standards for graduates of initial teacher education or for those entering the profession should be an integral part of a more general quality assurance strategy for the training of practising teachers (including measures for making teaching an attractive profession, selecting trainee teachers, ensuring the quality of training processes and keeping good teachers in the system). Focusing all efforts and attention on just graduation from training or the entry into the profession could prove fruitless and inefficient. It is clear that merely introducing standards and assessments to filter entry into the profession is no guarantee of ensuring well-trained novice teachers, as this depends on improving the quality of training provision and having consistent policies to make the career more attractive to applicants with great potential.

For instance, if teaching is not made an attractive career option that encourages applications from increasingly bright candidates wishing to train as teachers, it will not be feasible to demand that graduates meet absolute and challenging standards (due to the risk of a teacher shortage within the system). It would also be inefficient to establish such standards and then witness many well-trained teachers abandoning the profession a few years into their practice.

9.2. Using standards for novice teachers as the lynchpin for regulation measures (professional qualification and accreditation) and to guide and support initial teacher education

The explicit definition of what is expected from teachers at the end of the training and before entering the profession can guide training regulation policies and measures. Standards provide a clear quality criterion for assessing institutions in accreditation processes (do their training processes lead to standards being met? Is there sufficient evidence that the institutions require students to meet standards in order to graduate?) and provide definitions that can be used to organize assessments defining the ideal profile of candidates entering the profession. However, it is worth noting that standards do not only provide criteria for external regulation of training institutions. Comparative experiences show that standards also give institutions parameters for guiding their student evaluation and training processes. In this sense, standards are useful for regulating initial teacher education and for guiding policies to support and develop training processes by encouraging them to develop the necessary skills in their students.

9.3. Tending towards a comprehensive assessment of standards to include knowledge and initial practice of teaching

Most standards define knowledge and practice expected from novice teachers. The most complete systems to ensure the quality of teacher education assess both dimensions, often with more emphasis on the external assessment of knowledge at the end of training (with practice assessed more frequently during the initial probationary

or induction period). A complementary model is for training institutions to assess the practice of future teachers, based on criteria from standards and providing proof of rigorous assessment.

The general guiding criterion here is that the assessments or series of assessments that form the basis for decisions on entry into the profession should be comprehensive and refer to required knowledge and teachers' ability to put that into practice. A combination of instruments incorporating tests, portfolios and classroom observation can provide the evidence needed. Otherwise, there is the risk of initial training prioritizing standards or aspects of teaching that are assessed, rather than those that are not. As pointed out by Ávalos (2011), standards can be a powerful instrument for change if they are used to guide curriculum reform processes in training institutions. In contrast, if standards are only used for assessment, their impact will be more limited.

9.4. Developing standards for graduates using the same general framework of standards for the teaching profession

The development of teaching standards may require specification based on the level or stage of professional development (novice, experienced or expert), teaching cycle or subject taught. In the light of the above, it is advisable to establish a shared architecture for teacher standards, so that standards for novice teachers or recent graduates become part of a common framework of reference, avoid confusion and help to generate a shared language for the profession. In the medium and long term, it is possible to use this shared architecture to formulate more specific standards for given moments of professional development (graduation, professional accreditation, excellent performance and so on), for particular subjects (mathematics, science and so forth) and for certain educational levels (primary or secondary). Processes to formulate standards do not always follow a linear history or involve just one institution, which is why the same country will often have standards that are expressed or organized in different ways. In contrast, annex 1 features an excerpt from Australian standards, which use the same categories of standards for various professional stages (thus facilitating teacher understanding).

9.5. Developing standards through inclusive processes with the transparent contributions of the various groups involved and their differing visions

For initial training standards, the level of participation or leadership among teachers and trainers will certainly impact the meaning attached to standards (which will be more like the a banner rallying the profession when development has been thus led, while being more like external control when drafted without internal involvement). However, it is not enough for standards formulation processes to involve extensive consultations on content and emphasis. The most rigorous experiences of standard development have also publicized the reports on the results of consultations, in order to be transparent about how the different contributions of the various groups were taken into account. This avoids or minimizes the risk of (often highly costly) consultation processes from being unrecognizable as such.

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ANNEXES

Annex 1 Professional standards in Australia

Standard No.º1 – mastery of professional knowledge.

Full version at:
http://www.teacherstandards.aitsl.edu.au/DomainOfTeaching/ProfessionalKnowledge/Standards

Australian Professional Standards for Teachers
Professional Knowledge

Standard **1** Know students and how they learn

Focus Area	Career Stages			
	Graduate	**Proficient**	**Highly Accomplished**	**Lead**
1.1 **Physical, social and intellectual development and characteristics of students**	Demonstrate knowledge and understanding of physical, social and intellectual development and characteristics of students and how these may affect learning.	Use teaching strategies based on knowledge of students' physical, social and intellectual development and characteristics to improve student learning.	Select from a flexible and effective repertoire of teaching strategies to suit the physical, social and intellectual development and characteristics of students.	Lead colleagues to select and develop teaching strategies to improve student learning using knowledge of the physical, social and intellectual development and characteristics of students.
1.2 **Understand how students learn**	Demonstrate knowledge and understanding of research into how students learn and the implications for teaching.	Structure teaching programs using research and collegial advice about how students learn.	Expand understanding of how students learn using research and workplace knowledge.	Lead processes to evaluate the effectiveness of teaching programs using research and workplace knowledge about how students learn.

1.3 **Students with diverse linguistic, cultural, religious and socioeconomic backgrounds**	Demonstrate knowledge of teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds.	Design and implement teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds.	Support colleagues to develop effective teaching strategies that address the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds.	Evaluate and revise school learning and teaching programs, using expert and community knowledge and experience, to meet the needs of students with diverse linguistic, cultural, religious and socioeconomic backgrounds.

The same generic framework of standards is used to develop specifications for different stages of the professional career.

Annex 2 Specific standard for discipline-based and pedagogical knowledge

In this case, the same category of discipline-based knowledge is used to produce specifications and progression from discipline-based knowledge to pedagogical skills for teaching the subject.

Cellular and molecular biology **Descriptions of scope of understanding**		
Level 1: **Midway through initial training**	***Level 2:*** **End of initial education**	***Level 3:*** **First few years of professional performance**
Uses basic terminology of biological sciences in graphic, written and oral expression	Understands relationship between structure and function of genetic material	Produces observation guides for pupils to identify various cellular components
Recognizes and describes different cellular components and types of cells in laboratory practice	Has comprehensive knowledge of cellular functions	Produces guides for practical work used by pupils to prepare microscopic slides, cells and tissues for subsequent observation
Understands the role of biomembranes in cell compartments and diversification of functions	Familiar with advances made using DNA technology and gene donation	Develops in pupils the ability to obtain, select and record relevant biological information

Source: Project to Improve Initial Teacher Education in Secondary Education in Argentina, by Paula Pogré.

Annex 3 Graduation standards in Scotland

Standard for Initial Teacher Education

1 Professional Knowledge and Understanding

1.1 Curriculum

Elements of the Standard	Expected features ***By the end of the programme of initial teacher education, student teachers will:***
1.1.1 Acquire a knowledge and understanding of the relevant area(s) of pre-school, primary or secondary school curriculum.	• Demonstrate knowledge, understanding and practical skills in the area of the curriculum or subject(s) to be taught, referring this to national guidance as appropriate. • Know how to match the level of the curriculum and subject(s) to the needs of pupils. • Know how to use, design and adapt materials for learning and teaching to stimulate, support and challenge pupils.
1.1.2 Acquire the knowledge and understanding to fulfil their responsibilities in respect of cross-curricular themes including citizenship, creativity, enterprising attitudes, literacy and numeracy; personal, social and health education; and ICT, as appropriate to the sector and stage of education.	For all student teachers • Know how to promote and support the individual development, well-being and social competence of the pupils in their class/register groups; and show commitment to raising these pupils' expectations of themselves and others. • Know how to apply knowledge and understanding of personal, social and health education (including drug education), and, when appropriate, vocational education at a level which stimulates and challenges pupils being taught, and raises awareness of relevant issues. • Have knowledge and understanding of, for example, sustainable development, equal opportunities, additional support needs, citizenship, international education, education for work, enterprise. • Demonstrate appropriate knowledge and understanding of ICT and its uses in education and educational settings, referring to current national guidance.

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
	For student teachers at the pre-school and primary stages • Demonstrate knowledge and understanding of the content of the curriculum in relation to literacy and numeracy as set out in national guidance. • Demonstrate that their planning and work with pupils is based on a secure knowledge and understanding of the developmental stages of literacy and numeracy in children. • Demonstrate knowledge and understanding of the methods and underlying theories for effective teaching of literacy and numeracy; and select the most appropriate methods to meet pupils' needs.
	For student teachers at the secondary stage • Demonstrate knowledge and understanding of the demands of their subject in relation to literacy and numeracy. • Know how to match the demands of work in their own subject with pupils' skills in literacy and numeracy. • Know how to promote attainment in literacy and numeracy necessary for pupils' work in their subject area.
1.1.3 Acquire the knowledge and understanding to enable them to plan coherent and progressive teaching programmes, and justify what they teach.	• Know how to plan for effective learning in the area(s) of the curriculum or subject(s) to be taught, or themes being studied. • Demonstrate the knowledge and understanding to justify what is taught within the area of the curriculum or subject(s), in relation to its value in the curriculum; its contribution to children's learning and general development; and its relevance to the needs of the pupils being taught.
1.1.4 Acquire an understanding of the nature of the curriculum and its development.	• Show an understanding of the principles of structure, breadth, balance, progression and continuity in the curriculum to encourage challenge and enjoyment, personalisation and choice, coherence and relevance. • Know about and understand the processes of change and development in the curriculum. • Know how to draw on relevant comparisons with other sectors and systems.

1.2 Education systems and professional responsibilities

Elements of the Standard	Expected features ***By the end of the programme of initial teacher education, student teachers will:***
1.2.1 Acquire a broad and critical understanding of the principal features of the education system, educational policy and practice.	• Demonstrate an understanding of the national framework for, and developments in, the Scottish education system. • Know about and understand the provisions of the United Nations Convention on the Rights of the Child and the Children (Scotland) Act 1995. • Know about and understand international, national, and local guidelines on caring for children and teachers' roles and responsibilities in this area. • Know about and understand the legal and professional aspects of a teacher's position of trust in relation to pupils. • Demonstrate an understanding of principles of equality of opportunity and social justice and of the need for anti-discriminatory practices.
1.2.2 Acquire a good working knowledge of the sector in which they teach and their professional responsibilities within it.	• Demonstrate an understanding of the system in which they are working, including: the role and organisation of education authorities; the organisation and management of schools and resources; how classroom learning and teaching relate to school policy and development planning; quality assurance; staff development and review; and the work of parental representative bodies in education. • Demonstrate a working knowledge of the teacher's contractual, pastoral and legal responsibilities. • Demonstrate an awareness of their responsibilities for contributing to the ethos of the school, for example, by promoting positive relationships between staff, pupils and parents. For teachers in Catholic schools, an awareness of the distinctive ethos of the school is expected. • Know about reporting to parents and guardians on their children's progress and discussing matters related to their children's personal, social and emotional development in a sensitive and constructive way. • Demonstrate an understanding of the roles and responsibilities of staff within the school, including their responsibility for school improvement. • Know about the roles of other professionals and how to work with them. • Know about the informal school curriculum and the contribution they might make to it.

1.3 Principles and perspectives

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
1.3.1 Draw on relevant principles, perspectives and theories to inform professional values and practices.	• Have knowledge and understanding of the stages of child development which they are able to use to take account of their pupils' needs. • Have knowledge and understanding of the main theories of learning and draw on these in thinking about and planning their own teaching and pupils' learning. • Show the ability to discuss the principles informing their own view of education, the curriculum and professional practice, drawing on a knowledge and understanding of moral and religious values and philosophical ideas in a changing society.
1.3.2 Acquire an understanding of research and its contribution to education.	• Know how to access and apply relevant findings from educational research. • Know how to engage appropriately in the systematic investigation of practice.

2 Professional Skills and Abilities

2.1 Teaching and learning

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
2.1.1 Plan coherent, progressive teaching programmes which match their pupils' needs and abilities, and justify what they teach.	• Demonstrate that they are able to devise and implement plans for effective teaching and learning in the area(s) of the curricular or subjects(s) to be taught, or themes being studies. • Demonstrate that they are able to justify the content of their teaching in terms of its place in the curriculum, its contribution to children's learning and general development, and its relevance to the needs of the pupils being taught.
2.1.2 Communicate effectively, using a variety of media, to stimulate pupils and achieve the objectives of lessons.	• Demonstrate that they are able to use appropriate strategies to motivate and sustain the interest of all pupils during a lesson. • Demonstrate that they can communicate with pupils clearly and offer explanations in a stimulating manner. • Demonstrate that they can question pupils effectively and respond to their questions and their contributions to discussions.

Elements of the Standard	**Expected features** ***By the end of the programme of initial teacher education, student teachers will:***
2.1.3 Employ a range of teaching strategies and justify their approach.	• Demonstrate that they can select creative and imaginative strategies for teaching and learning appropriate to the subject, topic and pupils' needs. • Demonstrate that they can use a range of teaching approaches and homework to reinforce and extend work in class. • Demonstrate that they can select and use a wide variety of resources, including ICT and, where appropriate, the outdoor environment, in a considered way and in a number of different learning and teaching situations. • Demonstrate the ability to teach individuals, groups and classes. • Demonstrate the ability to evaluate and justify the approaches taken to learning and teaching and their impact on pupils.
2.1.4 Set expectations and a pace of work which make appropriate demands on all pupils.	• Demonstrate that they have high but realistic expectations of pupils and match tasks and rates of work to the needs of all pupils, including those with additional support needs, and ensure that the more able pupils are effectively challenged. • Demonstrate the ability to identify and respond appropriately to pupils with difficulties in, or barriers to, learning and recognise when to seek further advice in relation to their additional support needs. • Demonstrate the ability to respond appropriately to gender, social, cultural, religious and linguistic differences among pupils. • Demonstrate that they are able to encourage pupils to take initiatives in, and become responsible for, their own learning.
2.1.5 Work effectively in co-operation with other professionals, staff and parents in order to promote learning.	• Demonstrate that they are able to work co-operatively in the classroom and in multi-agency settings with other professionals, staff and parents. • Demonstrate the ability to identify the ways in which additional support in the classroom can assist pupils' learning.

2.2 Classroom organisation and management

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
2.2.1 Organise classes and lessons to ensure that all pupils are safe and productively employed when working individually, in groups or as a class.	• Know how to plan and provide a well organised, well managed classroom, designed to ensure that all pupils are safe and stimulate the pupils and ensure their health and safety. • Know how to co-operate in planning and organising working arrangements involving, as appropriate, nursery nurses, classroom assistants, parent helpers and other ancillary staff. • Know how to make full use of space to accommodate whole-class lessons, group and individual work. • Know how to make use of the environment and resources outside the school to support teaching and pupils learning. • Know how to enable pupils to make full use of well-chosen materials and equipment, including ICT. • Know how to use display effectively. • Know about and be able to apply appropriate health and safety regulations.
2.2.2 Manage pupil behaviour fairly, sensitively and consistently by the use of appropriate rewards and sanctions and know when it is necessary to seek advice.	• Show awareness of national advice and demonstrate the ability to use a variety of techniques to encourage pupils, promote positive behaviour and actively celebrate success. • Know how to carry out a school's discipline policy, including strategies for preventing bullying and sharing responsibility with colleagues for managing pupil behaviour in and around the school. • Know how and when to seek the advice of colleagues in managing pupils' behaviour or in identifying and responding to a pupil whose behaviour may show distress or the need for support. • Demonstrate that they can justify the approach which they take to managing pupils. • Role-model positive behaviour and communication from which pupils can learn. • Support pupils to develop positive social skills.

2.3 Pupil assessment

Elements of the Standard	**Expected features** ***By the end of the programme of initial teacher education, student teachers will:***
2.3.1 Understand and apply the principles of assessment, recording and reporting.	• Know about the principles and purposes of assessment for learning, including formative and summative assessment and criterion and norm-referenced techniques, to assess pupils' attainment and social development. • Know about monitoring progress and providing effective feedback to pupils. • Demonstrate that they can use assessment techniques appropriate to the age and stage of their pupils and have a knowledge of those required by SQA. • Demonstrate that they can use techniques such as observation, questioning, testing, marking of work and teachers reports to establish the levels of attainment of individuals, groups and classes. • Know about and make use of as appropriate a range of ways of recording the results of assessment and be able to keep good records. • Know about the ways of producing reports for others, including parents and other professionals, which are in line with national guidance and the framework for assessment plans and records.
2.3.2 Use the results of assessment to evaluate and improve teaching and to improve standards of attainment.	• Know how to monitor progress against national expectations and individual targets, diagnose difficulties, confirm attainment of learning outcomes and set targets for next steps in learning. • Know how to use the information obtained from assessments to encourage and reward pupils, to identify their strengths and difficulties in learning and to advise them on ways of overcoming difficulties, making progress and enhancing achievement. • Know how to encourage pupils to assess their own learning and engage with them in dialogue about their progress. • Know how to use results of assessment to set longer term targets for a class. • Know about studies of Scottish and international surveys of pupils' attainment.

2.4 Professional reflection and communication

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
2.4.1 Access and evaluate professionally relevant literature.	• Demonstrate that they can use appropriate search techniques to identify relevant literature. • Demonstrate that they can analyse and evaluate a range of texts. • Demonstrate that they can use what they have learned to broaden understanding and improve practices.
2.4.2 Construct and sustain reasoned and coherent arguments about educational matters and professional practices.	• Demonstrate that they can frame clear questions in discussing educational matters. • Demonstrate the ability to justify and substantiate an argument, using evidence as appropriate, and draw appropriate conclusions. • Demonstrate that they can produce written reports which are well-structured, convincingly argued and technically accurate.
2.4.3 Reflect on and act to improve the effectiveness of their own practice and contribute to the processes of curriculum development and school development planning.	• Know how to draw on evidence in making decisions about professional practice. • Know how to adopt a questioning approach to their professional practice and engage appropriately in professional enquiry such as action research. • Know how to contribute to the processes of curriculum development and school development planning.

3 Professional Values and Personal Commitment

Elements of the Standard	Expected features *By the end of the programme of initial teacher education, student teachers will:*
3.1 Value and demonstrate a commitment to social justice, inclusion and protecting and caring for children.	• Demonstrate that they respect and value children and young people as unique, whole individuals. • Demonstrate respect for the rights of all children and young people without discrimination as defined in the United Nations Convention on the Rights of the Child 1991, the Children (Scotland) Act 1995, the Standards in Scotland's Schools Act etc 2000 and the Additional Support for Learning Act 2005. • Demonstrate commitment to promoting and supporting the Children's Charter and the Framework for Standards for protecting children and young people.

Elements of the Standard	**Expected features** ***By the end of the programme of initial teacher education, student teachers will:***
	• Demonstrate that they value and promote fairness and justice and adopt anti-discriminatory practices in respect of gender, sexual orientation, race, disability, age, religion, culture and socio-economic background. • Demonstrate a willingness to intervene effectively to promote, support, and safeguard the individual development, well-being and social competence of the pupils in their class/register groups, and to raising these pupils expectations of themselves and others. • Know how to follow local child protection procedures, demonstrate an understanding of their role in keeping children safe and well and of the importance of sharing concerns about the safety or wellbeing of a child.
3.2 Value themselves as growing professionals by taking responsibility for their professional learning and development.	• Demonstrate a commitment to self-evaluation, lifelong learning and continuing professional development. • Demonstrate a professional commitment to meeting deadlines, seeking, accepting and acting upon constructive advice on progress. • Demonstrate a willingness to contribute and respond to changes in education policies and practices. • Demonstrate commitment to working collegially with fellow student teachers and others involved in the delivery of education and services for children on continuing professional development.
3.3 Value, respect and show commitment to the communities in which they work.	• Demonstrate a commitment to promoting and responding to partnerships within the community - with professional colleagues, other professions, parents, other agencies and the learners themselves. • Know about environmental issues and be able to contribute to education for sustainable development. • Know about the factors which contribute to health and well-being and be willing to contribute to promoting healthy lifestyles. • Know about the principles of education for citizenship and be willing to encourage pupils to be active, critical and responsible citizens within a local, national, international and global context. • Demonstrate a willingness to work co-operatively with other professionals recognising their different skills and possible different value bases.

Annex 4 Teachers' standards, UK Department of Education, 2012

TEACHERS' STANDARDS

Teachers make the education of their pupils their first concern, and are accountable for achieving the highest possible standards in work and conduct. Teachers act with honesty and integrity; have strong subject knowledge, keep their knowledge and skills as teachers up-to-date and are self-critical; forge positive professional relationships; and work with parents in the best interests of their pupils.

PART ONE: TEACHING

A teacher must:

1. Set high expectations which inspire, motivate and challenge pupils

Establish a safe and stimulating environment for pupils, rooted in mutual respect set goals that stretch and challenge pupils of all backgrounds, abilities and dispositions demonstrate consistently the positive attitudes, values and behaviour which are expected of pupils.

2. Promote good progress and outcomes by pupils

Be accountable for pupils' attainment, progress and outcomes be aware of pupils' capabilities and their prior knowledge, and plan teaching to build on these guide pupils to reflect on the progress they have made and their emerging needs demonstrate knowledge and understanding of how pupils learn and how this impacts on teaching encourage pupils to take a responsible and conscientious attitude to their own work and study.

3. Demonstrate good subject and curriculum knowledge

Have a secure knowledge of the relevant subject(s) and curriculum areas, foster and maintain pupils' interest in the subject, and address misunderstandings demonstrate a critical understanding of developments in the subject and curriculum areas, and promote the value of scholarship demonstrate an understanding of and take responsibility for promoting high standards of literacy, articulacy and the correct use of standard English, whatever the teacher's specialist subject.

If teaching early reading, demonstrate a clear understanding of systematic synthetic phonics if teaching early mathematics, demonstrate a clear understanding of appropriate teaching strategies.

4. Plan and teach well structured lessons

Impart knowledge and develop understanding through effective use of lesson time promote a love of learning and children's intellectual curiosity set homework and plan

other out-of-class activities to consolidate and extend the knowledge and understanding pupils have acquired reflect systematically on the effectiveness of lessons and approaches to teaching contribute to the design and provision of an engaging curriculum within the relevant subject area(s).

5. Adapt teaching to respond to the strengths and needs of all pupils

Know when and how to differentiate appropriately, using approaches which enable pupils to be taught effectively have a secure understanding of how a range of factors can inhibit pupils' ability to learn, and how best to overcome these demonstrate an awareness of the physical, social and intellectual development of children, and know how to adapt teaching to support pupils' education at different stages of development have a clear understanding of the needs of all pupils, including those with special educational needs; those of high ability; those with English as an additional language; those with disabilities; and be able to use and evaluate distinctive teaching approaches to engage and support them.

6. Make accurate and productive use of assessment

Know and understand how to assess the relevant subject and curriculum areas, including statutory assessment requirements make use of formative and summative assessment to secure pupils' progress use relevant data to monitor progress, set targets, and plan subsequent lessons give pupils regular feedback, both orally and through accurate marking, and encourage pupils to respond to the feedback.

7. Manage behaviour effectively to ensure a good and safe learning environment

Have clear rules and routines for behaviour in classrooms, and take responsibility for promoting good and courteous behaviour both in classrooms and around the school, in accordance with the school's behaviour policyhave high expectations of behaviour, and establish a framework for discipline with a range of strategies, using praise, sanctions and rewards consistently and fairly manage classes effectively, using approaches which are appropriate to pupils' needs in order to involve and motivate them maintain good relationships with pupils, exercise appropriate authority, and act decisively when necessary.

8. Fulfill wider professional responsibilities

Make a positive contribution to the wider life and ethos of the school develop effective professional relationships with colleagues, knowing how and when to draw on advice and specialist support deploy support staff effectively take responsibility for improving teaching through appropriate professional development, responding to advice and feedback from colleagues communicate effectively with parents with regard to pupils' achievements and well-being.

* * * *

PART TWO: PERSONAL AND PROFESSIONAL CONDUCT

A teacher is expected to demonstrate consistently high standards of personal and professional conduct. The following statements define the behaviour and attitudes which set the required standard for conduct throughout a teacher's career.

Teachers uphold public trust in the profession and maintain high standards of ethics and behaviour, within and outside school, by:

- treating pupils with dignity, building relationships rooted in mutual respect, and at all times observing proper boundaries appropriate to a teacher's professional position
- having regard for the need to safeguard pupils' well-being, in accordance with statutory provisions
- showing tolerance of and respect for the rights of others o not undermining fundamental British values, including democracy, the rule of law, individual liberty and mutual respect, and tolerance of those with different faiths and beliefs o ensuring that personal beliefs are not expressed in ways which exploit pupils' vulnerability or might lead them to break the law.

Teachers must have proper and professional regard for the ethos, policies and practices of the school in which they teach, and maintain high standards in their own attendance and punctuality.

- Teachers must have an understanding of, and always act within, the statutory frameworks which set out their professional duties and responsibilities.

Annex 5 Extract of specific standards in the area of subject-based knowledge and teaching knowledge for basic teachers graduating from initial education in Chile

(downloaded from http://www.cpeip.cl/usuarios/cpeip/File/2012/librobasicaokdos.pdf in June 2013)

GUIDING STANDARDS FOR GRADUATES OF PEDAGOGY COURSES IN BASIC EDUCATION

Biology

Standard 3:	**Understands the concepts that relate structures to their functions in living beings, and is ready to teach them**

The future teacher recognizes the cell as the fundamental unit of living beings and can distinguish its essential characteristics. The person understands that organisms have different levels of organization and a life cycle marked by birth and death, and that those events are linked by processes of self-maintenance (organization maintenance thanks to energy), reproduction (conservation of genotype characteristics) and aging (gradual deterioration in functioning). The person can identify and incorporate biological, psychological and sociocultural contexts of the human being in understanding and promoting self-care and birth control. He/she designs learning activities and instruments for identifying pupil achievements in the development of those skills.

This is demonstrated by:

(1) Identifying the cell as the structural and functional unit of living beings, and relating the cell's characteristics and functions (composition, organization, nutrition, differentiation) with the functioning of organisms.

(2) Linking levels of organization (biomolecules, cells, tissue, organs, organisms and populations) and distinctive characteristics of living beings with their life functions (birth, development, breathing, food, reproduction, adaptation and death).

(3) Identifying genetic inheritance mechanisms and describing the function of DNA in cell mechanisms in general terms.

(4) Inferring how genetic information relates to observable characteristics in an organism.

(5) Illustrating structural similarities and differences between animal, plant and bacterial cells, and establishing links with the functions that characterize these cells (such as breathing, photosynthesis and chemical synthesis).

(6) Identifying the structures and processes that make up the systems of the human body and relating them to functioning and environmental adaptation.

(7) Identifying the energy and nutrition requirements of the human body and relating them to diet and health problems.

(8) Analysing human sexuality to cover biological, psychological and social aspects, as well as describing the morphology and mechanisms for reproduction and birth control.

(9) Identifying self-care practices in terms of hygiene, food and exercise, as well as technological advances used to diagnose and treat diseases.

(10) Analysing and interpreting the current curriculum relating to the structures and functions in living beings, and using its various instruments to analyse and formulate proposals for the teaching and assessment of pupils.

(11) Designing teaching strategies to relate concepts of structures and function in living beings, and knowing teaching strategies suited to the learning objectives.

(12) Applying assessment methods to check the progress of students in learning the concepts that can be used to link structures with functions in living beings, as well as using the results to feed back into learning and teaching practice.

[…]

Standard 10:	**Is able to motivate students to make links between their everyday lives and scientific knowledge**

The future teacher can recognize the right moments in the teaching and learning process to give students the opportunity to explore the impact of the sciences on culture, economics, society and technology. Similarly, the person can design and implement activities that promote in students the use of knowledge and skills from natural sciences to tackle various kinds of problems, facilitate decision-making or propose solutions to situations involving them. He/she designs learning activities and instruments for identifying pupil achievements in the development of those skills.

This is demonstrated by:

(1) Planning activities to use scientific knowledge in decision-making or problem-solving in students' various areas of interest.

(2) Developing activities that encourage students to read articles in newspapers and other media related to scientific endeavour, in order to promote analysis, critical thinking and discussions in the classroom.

(3) Knowing how to encourage students to use their scientific knowledge to assess differing viewpoints in everyday situations or issues of public interest, as well taking their own position.

(4) Designing activities that enable students to link technological development with scientific progress and society's needs in certain historical contexts.

(5) Designing opportunities for students to understand that scientific development alters humans' relationship with the environment and generating opportunities to reflect on the positive and negative effects on present and future quality of life.

(6) Developing learning opportunities for students to find out about scientific development in its historical and social context, using examples from natural sciences including national and foreign scientists of both genders.

Annex 6 Skills assessed in the probationary period in Colombia

Guidelines and protocol for the assessment of the probationary period for head teachers and teachers

ADMINISTRATION	**5. Support for academic management**	a) Develops a training proposal based on the principles and objectives of the Institutional Educational Project. b) Participates in ongoing improvement projects concerning the institutional management of basic primary education. c) Participates in the process of analysing and monitoring the school performance of students in assessment and promotion committees.
	6. Administration of physical and technological resources	a) Produces relevant pedagogical and didactic material for academic activities for that educational level. b) Contributes to the school meeting and maintaining satisfactory physical and hygiene conditions. c) Harnesses and explores continuously the teaching potential of ICTs with due regard for the content for this educational level.
COMMUNITY	**7. Institutional coexistence**	a) Promotes family participation in students' learning process. b) Builds strategies for the peaceful resolution of disputes among children, with reference the school's coexistence handbook. c) Promotes coexistence and peaceful resolution of conflicts arising in the school.
	8. Interacting with the community and environment	a) Links the teaching-learning process with knowledge of the environment around the student. b) Draws links with various institutions working with communities and promoting educational activities. c) Recognizes the impact that media events outside the school have on the learning-teaching process, and proposes strategies to manage this effectively.

II

Part II:
Issues in service teacher training

Teachers' professional development: collaborative professional learning

Gloria Calvo [22]

Introduction

This document analyses some experiences of collaborative professional learning as part of Teachers' Professional Development. The main premise is the recognition that teachers' know-how is actively developed in processes of peer exchange.

This document seeks to provide a diagnosis using reliable information on certain strategies for teachers' professional development and ongoing training, with a special emphasis on collaborative learning, induction processes, the role of expert teachers and the use of ICTs as a way of improving and innovating teaching practices the region based on comparative evidence from the first world. The document aims to identify and analyse the various visions within the academic, technical and political discussions on such strategies, so as to provide guidelines for public policy-making in this area.

Teachers' know-how[23] is involved in a process of peer exchange. The social nature of teacher learning is beginning to be recognized as a modality that warrants inclusion within strategies for teachers' professional development.

This document intends to support that premise by using secondary sources to identify experiences of incorporating work with others into teacher training processes (at different stages of professional development).

The text is divided into five parts. The first presents the importance of collaborative professional learning in the framework of teachers' professional development, with an emphasis on working with others (model or peer) who tend to have more years of professional experience, good practices to share and a willingness to guide, direct, take on and support.

The second part relates to all those experiences that see the school as the unit that brings together individuals, processes and trajectories – with any change affecting the organization (and seen as a learning opportunity). Learning communities appear as a key strategy, and these can be built using many activities to boost institutional life.

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23 *The term teacher is used throughout this document. The various possible terms have differing connotations at the international level.*

The third part concerns experiences of collaborative professional learning using ICTs. It should be stated that these experiences are strategies within other proposals, such that they may be assimilated as learning mechanisms (without their use leading to virtual knowledge). In this sense, there appear to be more weaknesses than strengths in this category.

The fourth part tackles the technical, academic and policy debates on some key issues in the strategies identified.

The fifth part provides some conclusions and guidelines on public policy-making in this sector.

1 Collaborative professional learning – remembering what we know

Teaching is a collective endeavour. Student learning is the result of interventions by a group of teachers who diachronically or synchronously work with and on pupils (Ávalos, 2009). Learning is therefore the effect of a relationship. This contemporary trend is helping to redefine the teaching collective on an organic (rather than simply mechanical) basis, and has implications in terms of teacher identity and initial or ongoing teacher training processes.

In this collective endeavour, teachers interact informally through professional peer meetings and discussions; reading and exploring various factors of teaching; uncovering their own training needs; taking decisions in a reflective and informed way; and revisiting decisions to refine or change them. These collective actions can give rise to processes of collaborative professional learning.

Collaborative professional learning is part of teachers' professional development, and is a way of reclaiming teacher training processes as activities that involve shared action. One basic principle involved is the idea that teachers' professional development is a horizontal and collaborative endeavour involving trainers, experts and teachers, and one that provides a new appreciation of know-how through action and principles built on experience. It should be stated that professional development is a situated process. It requires time, teaching resources, assistance and support structures, as well as parameters on contracting, monitoring, assessment and professional incentives.

The main idea of collaborative professional learning is the recognition that teachers learn from their teaching practices: they learn to learn, seek, select, experiment, innovate and ultimately to teach. Collaborative professional learning thus combines various strategies involving peer interaction, such as learning new teaching methods, reflection on classroom events and the formulation and review of institutional educational projects (in the presence of internal and external experts).

1.1. Learning from others

Teachers construct their identity and career throughout their initial training and their professional socialization in educational institutions.[24] These processes occur in the context of small cultures of professional belonging: departments, subjects (for secondary teachers); and the cycle or curriculum speciality (for primary teachers). This constructed identity is often not part of explicit learning processes. The interest of pinpointing this within collaborative professional learning processes lies in the possibility of changing teachers' teaching processes to improve teaching-learning processes.

Latin America has experiences of collaborative professional learning based on the study entitled Maestros que aprenden de Maestros [Teachers who learn from teachers] (Vaillant, 2009; Terigi, 2010). These experiences relate to specific projects such as those to accelerate learning or targeting vulnerable populations (such as community teachers in Uruguay or Maestros-Zap in priority areas of Buenos Aires). The novelty of the experiences analysed below lies in: the model of clinical practice; teacher training based on the identification/dissemination of successful practices; and the mentor figure.

Role of expert teachers: mentor, guide and coach

In the literature on teachers' professional development, the three terms above are used interchangeably. However, there are some differences. Inostroza, Tagle and Jara (2007) and their group at the Catholic University of Temuco (Chile) define mentoring as a collaborative process that involves interactions, conversations and reflective analysis to change one's way of being and produce teaching knowledge in practice. Situated learning is vital to this model of collaborative reflective mentoring. Mentors should be critical experts acting as strategic mediator to achieve improved teaching practice. As a reflective critical agent, the mentor analyses practical problems of functioning but also provides guidance towards a transformation in practice within a time and space context with specific sociocultural characteristics.

Ávalos (2006) reports the use of mentoring using a clinical approach, with the observer making suggestions to the person observed. In this perspective, professional change is dependent on reflections concerning practice, with such reflections potentially helped by observing others, describing one's experience, classroom performance observation and the exchange of opinions and ideas. These activities are used by the observer to formulate suggestions for the person observed (clinical supervision).[25]

Guidance is more of a reference to a horizontal support relationship with a willingness to learn from the teaching situation. This references popular education and adult education.

The meaning of coaching is more closely linked to modelling. Mutual professional support from expert teachers is the rational basis for a teaching model in which demonstration is followed by practice to incorporate the suggestions and recommendations made. The

24 *The term "educational institutions" covers the concept of school (because of the various meanings of "school" worldwide).*

25 *Villegas-Reimers (2003: 90) points to the Harvard-Newton Summer School as being at the origin of these practices, while also describing clinical supervision experiences from Pakistan, Nigeria and Brunei.*

mentor/colleague/observer advises or provides constructive criticism of the teacher's demonstration (Marcelo, 2008).

This is most effective when collaborative processes are involved, particularly if there is a meeting before and after the observation. Also effective is small group work involving experienced and inexperienced teachers, or mixed working groups based on specialism or involving teachers and managers or teachers with students. Recordings and videos are used in this context.

The following examples illustrate the role of others in collaborative professional learning.

In the United States, Arizona, California, Nevada and Utah had mentors responsible for 12 novice teachers. Mentoring was the main component of induction programmes, and mentors were therefore subjected to a careful selection process in each district: minimum five years of primary teaching, recognized exemplary teacher and experience designing and implementing standards-based teaching. Interviews were conducted by a panel including district coordinator, teacher union representatives and other mentors.

Each programme provided the mentors with 10 to 12 days of training over four sessions. The training then brought everyone together to work together to enrich the programme curriculum and to encourage concrete discussions on the best way of tackling implementation issues.

Training focused on learning to: (1) improve the teaching of novice teachers, including the use of ways and processes for advancement, and (2) mentoring abilities to work with beginners, such as the use of teaching evidence (rather than opinions) and conversational techniques such as paraphrasing and questioning.

Interaction was encouraged with programme staff, other mentors and district coordinators. Weekly meetings enabled mentors to exchange ideas on successes and failures in their work with novice teachers, and to receive support. Programme leaders and staff also reviewed and provided information on the records used by mentors (weekly meetings with teachers). A discussion was organized into what a beginner needs from the mentoring relationship (more or less contact time with the mentor, teacher-led ideas for tackling needs, how to use the programme tools and how to keep up to date with the programme implementation).

Johnson et al. (2000, cited by Villegas-Reimers, 2003) describe South African coaching experiences based on curriculum working groups and discussion groups. The work with fairly unsettled science teachers was hugely successful. Alongside initial training, teachers in Finland are offered considerable support for collaborating with peers to develop lesson plans and assessments (with a major degree of autonomy). Then there is the clinical practice model, where an educational institution is associated with a university. The teachers are specially selected and trained to guarantee a modelling of effective practice, with the help of a coach for beginners. University courses also offer models of problem-based and cooperative learning strategies, reflective practice and computer-aided education. The assessment system for higher education rewards effective and innovative practice in university teaching.

In Latin America, the most noteworthy work with mentors has taken place in Chile (Boerr, 2010) and Argentina (Alen & Allegroni, 2009). These cases will be described during the analysis of the role of other people in joining the teaching profession.

Residency

Boston has launched a teacher training programme based on the medical residency model to combine a high proportion of practical experience, a strong theoretical framework and a higher-level qualification (Masters). Following an initial summer course of six weeks, students join educational institutions for one year.

For that year, they spend four days a week with an experienced teacher and one day in classes. In the second year, each new teacher is assigned a mentor who provides two and a half hours of classroom training per week. Mentors act as models, participate in class delivery, observe and help with class management, lesson planning and the design of teaching strategies. In order to improve the quality of the programme's mentoring, Boston currently employs full-time expert mentors (with each one responsible for 14 teachers).

In Japan, teacher training programmes in universities tend to focus on generating the intrinsic skills and pedagogical and subject knowledge of aspiring teachers. In 1989, the country introduced an intensive training programme for first-year teachers, during which time they develop their practical teaching skills. Programme participants work full time in educational institutions and receive up to two days a week of one-to-one training and support from senior teachers. The senior teachers act as trainers and mentors, although they do not assess new teachers during that first year.

England developed a national expert network to train trainers in effective teaching strategies for improving academic results and techniques to ensure that teachers apply them. This has significantly improved results in just three years.

Several systems in the Middle East have used training strategies to introduce major changes in the teaching in educational institutions by using trainers from other countries to quickly train large numbers of teachers in various teaching styles.

Lesson study

This incorporates didactic traditions from various parts of the world. The main benchmarks are Asian countries, with impressive results in PISA tests (particularly in the district of Shanghai). The aim is to preserve good teaching and translate it into ways of delivering a class. A good teacher can give a step-by-step explanation of what is happening in the classroom, and this systematization can be used to enable future or practising teachers to appropriate these methodologies. In China, in what is a clear reflection of the country's idiosyncrasies, the idea is repeating until modelling.

The spread of this strategy has been linked to reform processes in which classroom practices need to be as uniform as possible in order to guarantee teaching content. Teachers analyse and develop lesson templates in teams. Each teacher is required to

think deeply about his/her own practice with the help of peers. Final lesson templates are then recorded and distributed.

Another variation of this strategy (demonstration lessons) involves teachers presenting excellent practices to a wider group of instructors, following by discussion and feedback sessions. The lessons are used to provide each teacher with access to examples of excellent practice, recognize development and make teachers responsible for the quality of their teaching (McKinsey & Company, 2007; Lewis, 2002).

During their careers, teachers are involved in study groups on teaching, in order to improve their teaching on a day-to-day level. There is a time line of meetings, and these involve associated staff and laboratory assistants to plan lessons on a particular topic in a very detailed way for the week ahead. The study plan is not only a guide for the teacher during class, but also a useful way of documenting a teacher's professional performance. During teaching itself, teachers can observe each other or be observed by peers. For instance, when a change in the study plan introduces a new teaching topic, teachers can be observed by new ones (so that the latter can learn from more experienced colleagues: senior teachers as mentors or head teachers for control or assistance in constructive development). Some teachers offer demonstration lessons (known as public lessons) for a large audience of other teachers to observe and make comments.

The situation is similar in other East Asian countries that take part in PISA, as they provide interesting models of professional collaboration that extracts maximum impact from strong teaching performance. The lesson study tradition in these countries also means that Asian teachers are not alone. They work together in a disciplined way to improve the quality of their teaching. This means that teachers whose practice falls below the highest performance standards can see what constitutes good practice and adopt strategies for improvement. Given that the structure of the teaching workforce in East Asia includes opportunities to become a great teacher and move up in a career of growing prestige and responsibility, the wages of a good teacher could be even better (OECD, 2011, p. 70).

Lesson study experiences are also noteworthy in Japan. This was discovered by Chilean university teachers as part of the Ministry of Education's Agreement on mathematics teaching with that country (Mena, 2007). As a result, in 2006-2009 Chile's Training, Experimentation and Education Research Centre (CPEIP) introduced a version of the lesson study strategy based on collective planning (going from guidelines to classroom practice) and the mutual observation of filmed classes. This mainly happened in communal workshops. Cambodia, Canada, Egypt, Philippines, Ghana, Indonesia, Kenya, Laos, South Africa and Finland have examples of this strategy, as do the Dominican Republic, El Salvador, Nicaragua and Guatemala. In the United States, there are 130 lesson study groups.

Lesson study has much to offer in terms of learning: the use of systematized good teaching practices; joint lesson planning; the importance of sharing learning and observing each other's practice (alongside a teaching career that balances teaching activities with teachers' professional development). The assessment process for

promotion in Shanghai is regularly carried out by designated assessors and expert groups of experienced teachers or peers. Each grade or level of the teaching career has its own requirements. National categories have parallels with those at municipal and district level, so that a teacher may be a grade 1 teacher in national terms and a basic teacher under the district system (with the former being a prerequisite for the latter). The municipal term MingShi (famous teacher) requires being a State "senior teacher" under the national system, and this is a fundamental role in the profession's learning system. Each MingShi can expect to mentor other teachers, meet with them every two weeks and provide them with resources to maintain the offices in their educational institution and hold "development workshops" to work on study plans and professional development programmes for teachers of the district as a whole (McKinsey & Company, 2007, panel 27).

1.2. Collaborative professional learning with others

Teachers' learning is a relevant task to every educator, and involves observing the practice of others, exchanging experiences and reflecting as a group. The conclusion of John Hattie (2009), having reviewed 50,000 studies and 800 meta-analyses on student performance, was that: teachers learn from what they do. This is the essence of collaborative professional learning: teachers who study and analyse their daily practices together.

Similarly, Densimone et al. (2002, cited by Montecinos, 2003) conducted a three-year longitudinal study in 30 educational institutions in the United States to find that professional development programmes are more effective at changing classroom practices when they involve the collective participation of the same school, department or educational grade (p. 114).

Studies on teacher learning emphasize a training approach that refers to the personal process that each teacher must go through of constructing: an identity, the conceptual basis needed for teaching and a repertoire of forms of teaching suitable for the teaching situations to be faced (Pogré, 2012). Collaborative professional learning makes it possible to link the beliefs and values of the educational institution with what the teacher does on a daily basis as part of pedagogical practices.

The final approach is allowing teachers to learn from their colleagues. Unlike other professions, where people naturally work in teams, teachers usually work alone and therefore have no chance to learn from peers. Several education systems use strategies aimed at changing this situation, including educational institutions where teachers regularly observe their colleagues practice (which creates an atmosphere conducive to the exchange of experiences on what does and does not work; encourages mutual feedback; and helps to shape a shared motivation and aspiration to improve the quality of teaching). These systems are currently some of the highest performing out of all educational systems worldwide.

The most representative experiences of collaborative professional learning described below are networks, internships, joint planning based on collaborative practice and projects as a team building strategy.

Networks

A network can be compared to a professional learning network that can hugely facilitate the transfer of complex knowledge. A learning community of teachers is formed and maintained based on their professional interests and needs, thereby generating spaces for reflection and action that help improve teaching practice and student learning (Arellano & Cerda, 2006).

Networks could be said to have created and maintained a powerful alternative to traditional professional development, as they are a better way of adapting to rapid cultural change and tackling the increasing complexity of teaching work. Furthermore, networks have helped to strengthen the concept of collaborative work for enhancing teaching by improving group identity, establishing rules of interaction, introducing community responsibility for compliance with the rules and ensuring the group's commitment to take responsibility for the development and growth of colleagues (Borko, 2004). These purposes are also reported by Sachs (2002, cited by Villegas-Reimers, 2003: 79) in relation to teacher networks in Australia, Japan and Finland.

Australia's National Schools Network involves 400 educational institutions. The Network was designed as a national research project to help education policy-makers identify possible obstacles to reform processes and advise teachers and educational institutions on how to implement the policy (Villegas-Reimers (2003:80)).

There are many varied experiences of networks in Latin America. These range from institutionalized forms of teachers working with teachers in regional education centres[26] (*such as Mexico's Teacher Centres*) to networks involving local centres (School renewal and research – IRES – in Spain) or educational institutions such as the Teachers' Teachers Network (RMM) in Chile, as well as the teachers network researching in educational institutions in Mexico, Brazil, Argentina, Colombia and the Bolivarian Republic of Venezuela as part of an international movement involving education research (which here refers to research that teachers do into their daily practice). The RMM teachers network in Chile enables outstanding teachers to support peers in need (usually in their school or commune).

Gatti, Siqueira and Dalmazo (2011) described a trend linking teacher know-how in practice to the know-how of teacher training institutions, in the form of Brazil's Ongoing Training Network of the Department for Basic Education and the Diversity Training Network of the Department of Ongoing Training, Literacy and Diversity in four education departments (including Espíritu Santo). These networks are examples of institutionalized forms of teachers working with teachers (as is the Federal Ongoing Training Network in Argentina).

There are also experiences of teacher networks in Ontario and Long Beach (as part of other instances of collaborative professional learning), as well as networks associated with learning communities aimed at using reading as a basis for the discussion of teaching

26 *Spain has considerable experience of collaborative professional learning in its Network of Teacher Centres. The country has 19 such centres (Jiménez, 2006). They provide support to teachers from management to teacher training. Examples include the Canaries, Granada and Extremadura.*

and learning issues (with a view to devising an interdisciplinary humanities curriculum). The collaboration of the teachers involved is at the heart of these experiences, as in the case cited by Borko (2004), where a group of English and History teachers joined up with university teachers in an urban educational institution in Seattle, Washington, United States.

Internships

These are an in-house exchange of experiences that encourage technical and pedagogical dialogue based on the experiential knowledge of teachers. Peer-based learning in teachers' own environment has a major impact and leads them to make changes to their management practices, know themselves better and value themselves as professionals.

Internships enable teachers to begin a reflective practice on being and doing, within the daily practice of teacher training. In Chile, 500 teachers took part in this experience over seven years.

The Chilean experience gave rise to double exchanges between the host and interning teams, such that peers come together around a significant educational experience, whereby one person has had the experience and offers another person the opportunity of discovering the experience in his/her own context.

Once the internship is part of a teacher's professional development plan, the teacher can transfer to another educational institution under the coordination of a programme tutor (an attractive post for experienced teachers) and carry out tasks including classroom observation, joint planning, assessments and selection and organization of teaching proposals and so forth. The change of context encourages a review of one's own abilities in the context of the organizational culture of another educational institution. This involves other collaboration opportunities with peers, other forms of links with families and teachers and other ways of communicating with students (Ávalos, 2002, cited by Ávalos, 2007).

Special mention should be made of the Pedagogical Expedition in Colombia, which was intended to help teachers communicate and learn from each other by going on trips and visits to other educational institutions, forming networks and working with university trainers. The significance of this Colombian experience in terms of teacher identity has been discussed in several international articles (Unda, 2002).

Collaborative practices

These practices occur during planning and/or observation of classes, which can be assisted by observing others (in the sense of coaching). This includes collaborative workshops that focus on the reactions of colleagues or an external observer (mentor). They are based on narrative experiences, exchange of opinions or ideas and even classroom observations.

The Aspire project in the United States is an example of collaborative practice. Its strategy is based on joint lesson planning, which takes place during the half day off on Fridays. The planning includes a review of student results. Teachers are grouped by level or area, and placed with colleagues wherever possible. Each lesson plan is reviewed and assessed, and the relevant headings are established with the support of more experienced teachers in the case of planning by new teachers (peer support). For classroom monitoring, teachers use personal microphones like the ones used by television presenters for the purposes of feedback. A video is also recorded for subsequent analysis. Peer support forums are encouraged, and head teachers can form a leaders group (of highly effective heads) that can then mentor other heads in the system.

Joint lesson planning has become the cornerstone of collaborative practice under Aspire. A visit to a series of Aspire educational institutions reveals clear similarities in the classroom and in the teaching practices. The scheme has resulted in high performance among participating teachers and educational institutions.

Aspire applies the same criterion to its coaches, as there were initially a wide range of training methods without much clarity on what worked best. Educational institutions were therefore asked what was helping students, and this information was then used to formulate four sets of standardized training guidelines.

School support networks are an example of collaborative practice. In Hong Kong, educational institutions are connected and work together on curriculum reform processes. Teachers disseminate good practice. Boston created nine geographical school groups that take part in support forums. With a formal connection among head teachers, school groups also formed a network of educational institutions and encouraged teacher-pupil interactions (McKinsey & Company, 2007).

Increasingly, professional development includes a range of formal and informal experiences (with some incorporating collaborative professional learning as with the Ontario Elearning Consortium). The latter involved four neighbouring educational institutions in Toronto, as well as the University of Toronto and the Ontario Institute for Studies in Education (partnerships). The Consortium involves cooperative learning, peer coaching, mentoring, networks and practice analysis (Johnson et al., 2000, cited by Villegas-Reimers, 2003).

The North Carolina Teachers' Academy provided 40 weekly workshops based on the experiences, visions and needs of participating teachers. Boston's Middle School Mathematics Project combined workshops with networks and group discussions on teachers' problems. The Chautauqua Project combined workshops, courses, grants and laboratory sessions. In New Zealand, curricular reform incorporated workshops providing additional support and information, including visits to educational institutions (Eror, 2001, cited by Villegas-Reimers, 2003).

For five years, Chile held two communal workshops. The programme's main objective was to give communes a system of ongoing peer training conducive to generating spaces for systematic pedagogical reflection. With this in mind, weekly or fortnightly meetings

were held and chaired by a senior teacher. This renowned teacher was selected by the commune and given two five-day training sessions by CPEIP. Workshop subjects included mathematics, language and communication, understanding the natural and social environment, physical education and English. During the programme, 200 workshops were held (Cerda & Arellano, 2006).

Collaborative professional learning through projects in the United States

Ávalos (2007) describes two projects that warrant mention for their longevity and their impact on students taught by participating teachers. Villegas-Reimers (2003:114) found that these experiences had the following characteristics associated with collaborative professional learning: teacher learn by teaching others; they learn by making their practice public and subjecting it to peer discussion; they learn to write and teach writing as a shared purpose; they undergo ongoing rigorous assessment; and they form support networks.

The National Writing Project aims to enhance writing abilities and generally strengthen the mastery of language as a subject. The strategy consists in writing in small groups to teach each others using feedback, until each person feels ready to make a public presentation. The project has also given rise to networks involving the school communities and educational systems of each participant. Achievements include improved perception on the teaching of writing, increased time teachers spend on teaching writing and the demonstration of teaching methods considered exemplary. The students of these teachers write in a more organized and coherent way, thereby demonstrating proper use of the rules of written language (Lieberman & Wood, 2003; Academy of Educational Development, 2002, cited by Ávalos, 2007).

The other project in the United States is the Classroom Assessment in Mathematics Network, which is based on small-group discussions on student results. The project also includes coaching and networks of teachers, supervisors and members of the assessment office of the Educational Development Center. The project's teachers also have time to apply innovations, with such actions supported by workshop and reflections (Driscoll & Bryant, 1998).

These two long-term strategies involve alliances with university centres, summer workshops, practical learning, networks and constant communication, which result in an impact on teaching quality and student attainment in two of the curriculum's main subjects.

1.3. Collaborative professional learning in entry processes

The review of experiences carried out for this study demonstrated significant use of collaborative professional learning strategies in projects that aim to support the entry into the teaching profession (which is a crucial stage in constructing the teacher's professional identity).

In Singapore, novice teachers are coached by senior teachers and teacher trainings in each educational institution. During this process, novice teachers have their working day reduced by two thirds. The programme includes mentoring, classroom observation, lesson study, reflective analysis of practice and case studies based on pupils' learning outcomes – all with a view to finding solutions to problems and putting them into practice. Teachers in Singapore have 20 hours a week to observe colleagues' classes and plan their professional development (which includes 100 hours a year outside their work time). There are teacher networks supported by learning circles, workshops, conferences, websites and series of publications.

Ontario has recently introduced the New Teacher Induction Program (NTIP) to provide guidance, mentoring and professional development activities based on the needs identified by novice teachers (such as communication with parents, classroom management to promote educational inclusion and assessment/teaching strategies to work with special-needs children).

In Finland, induction processes combine research, practice and reflection. They are also accompanied by formal academic qualification processes such as a Masters, in which pedagogy is a priority area within the training content. They study assessment, teaching and educational innovation. The main methodologies are problem analysis, reflective practice and ICT support. Classroom practices are also observed, while teachers are observed by supervisors and attend conferences at faculties of education. These processes take up between 15% and 20% of work time. It should be stated that all Finnish teachers have time in their day to prepare lessons, as well as two hours a week for joint planning with those in their team.

Switzerland has practice groups, which form a structured support network to help novice teachers solve their own problems. This takes up 50 hours a year and involves a facilitating teacher. The group organizes visits for classroom observation, followed by reflections on what was observed. They observe each other along with the coordinator, according to the following sequence: pre-observation, observation and reflection.

In Israel, novice teachers have mentors and working groups. They meet every two weeks to discuss and analyse teaching and management issues. There are 5,000 mentors, who have been selected for being the best teachers in their institution.

In New Zealand, novice teachers meet up in support groups at least once a month. Novice teachers are not always young but can be from other countries (and have needed retraining in certain specialisms).

In the United States, the University of Colorado's programme has group work as its main strategy. Novice teachers meet up every two weeks to attend seminars and discuss problems and expectations.

Uruguay supports new teachers by using "teaching partners" to support beginners through ongoing observation of their daily practice and subsequent analysis for improvement (Rodríguez & Grilli, 2012).

In Colombia, the "Experience makes the teacher" project includes an "Is the bridge broken?" strategy that helps novice teachers identify the teaching knowledge of senior teachers who can contribute to their professional teaching development and build bridges between generations of new and older teachers. This involves sharing life stories and joint reflections on teaching practice, with a view to recognizing and identifying what has the most meaning for sharing with other colleagues. Expeditions by educational institutions to document practice also played a part, as inspired by the National Pedagogical Expedition.

Chile's experiences of collaborative professional learning in entry programmes have prioritized mentoring as part of the collaborative reflective model based on constructivist movements. There is a preference for team work, group teaching arrangements and blended learning (b-learning). García, Morales and Kaechele (2010) describe progress made in defining the personal and professional characteristics of a mentor as part of an efficient support structure. Núñez and López (2010) report experiences of participatory reflection based on the dialogue within the mentor-novice pair, including the use of imagery and projection techniques. Beca and Cerda (2010) refer to joint lesson planning, observation and mutual analysis of observation and the use of portfolios and registers.

The Argentine experience is presented by Alen and Allegroni (2009). This system provides support in the field to overcome the conventional division between initial and ongoing training using various strategies: co-observation or peer exchange, practice analysis workshop, case studies and videos (all within learning communities). The country also uses protagonist research proposed by Rodrigo Vera in teacher workshops (Alen & Allegroni, 2009, p. 47). The theory is based on Rockwell (1995, cited by Alen & Allegroni, 2009, p. 21), in the sense that the school introduces daily training mechanisms that reaffirm the importance of working in context.

An initial overview of these experiences shows that the use of mentoring, support or coaching and many other methods makes it more of a cluster of strategies than a single strategy (albeit in the framework of collaborative professional learning).

In conclusion, this first section on collaborative professional learning experiences with and from others is brought to a close by recognizing that mentoring, support, coaching, residencies, lesson study and workshops enable teachers to **learn from others as models**, while networks, internships, collaborative practice and projects can be used to **learn from others as peers.**

2 Collaborative professional learning in educational institutions

The documents analysed revealed a trend involving ideas of effective schools and "learning organizations". These collaborative professional learning experiences introduce professional teacher development opportunities into educational institutions. In this sense, the raison d'être of learning communities lies in the opportunity to share and

analyse the daily work of the institution and in leadership for taking responsibility for the quality of learning and professional development opportunities (without neglecting teaching).

Collaborative practices in educational institutions relate to what teachers and head teachers do when they work together on developing effective learning practices, analyse what is really happening in the classroom and ensure that not only individual but also collective actions are carried out properly.

As stated in the first section, teachers learn from what they do. In practice, they learn from classroom observation and analysis; data analysis; pupil outcome; and task analysis. These analyses do not necessarily take place in real time. They can be carried out using cases based on previous data. Analysis can also involve collaborative problem solving and analysis of individual and collective needs (in other words, joint problem solving). According to Little (2001, cited by Ávalos, 2007) and Hargreaves and Shirley (2012), new professionalism is marked by teamwork and team learning. Collaborative cultures are closely linked and aim to do things better and with fewer errors.

Fullan (2001a, 2001b) posits that these collaborative cultures formulate rules in groups; clarify and determine what is essential to learning; develop guides quickly; reach rapid agreements on decision to be taken; determine standards and how students must work to achieve them; formulate shared assessment headings; reach collective agreements; analyse jointly student's work and learning outcomes; define specific interventions for individual students; monitor the result of planned strategies; and reflect together on the effectiveness of learning strategies and of the group.

In professional learning communities, collaboration is a systematic process in which teachers work together in an interdependent way to impact classroom practices, with a view to achieving more effective learning. From this new perspective, collaborative professional learning as a strategy for teachers' professional development has broader targets (for the educational institution and the education system), and provides feedback on school practices and assessment. Teachers almost never work together, but doing so leads to better pupil learning outcomes. Teachers can do more and need to be motivated into doing so. They then acquire more experience and expertise, as well as increasing the amount of information exchanged.

Collaborative practices affect the dynamics of an educational institution. First, such practices shift institutions from a situation of teachers as emperors, to one where teaching practices are public and teachers are solely responsible for pupil learning. Second, these practices promote a cultural change from teaching to learning. There is therefore an emphasis on improved learning and collaborative work to develop mechanisms that will achieve this.

Collective capacity generates a sense of emotional community and technical expertise that cannot be achieved in isolation. Michael Fullan (2010) refers to this as lateral learning, and says it involves the following three changes: (1) large-scale mutual support to build educational identity while establishing and recognizing a peer system; (2) collaborative

competition, with each person trying to go further; and (3) development of a shared vision of what it means to learn and teach.

Collaborative practices involve excellent learning and leadership routines for teacher learning communities by making teaching public and making teachers support their peers. These practices are based on a professional development infrastructure for teachers in which the latter are committed not only to their individual development, but also to analysis and the educational skills training of others in the system. There are no external requirements in human or other resources. Commitment is developed within a teaching career, where the more highly trained help others in their professional teaching development. Collaborative practices take root at the heart of educational institutions and then blossom in the form of daily teaching practices.

Collaborative practices ensure that teachers and education authorities work together to achieve effective teaching practices based on what is really happening in the classroom, with a special emphasis on the components of good practice and a guiding purpose of pupil learning. Collaborative work is based on the assumption that individuals learn better when they interact with colleagues and relate new ideas with existing shared knowledge. From the assistance point of view, a traditional intervention style (based on the assumption that curricular innovation comes from a subject expert with external recommendations) is replaced by an approach that places the educational institution at the heart of change, which means that the work lies in establishing a collaborative relationship with the relevant educational institutions.

Nowadays, working with educational institutions is not considered a linear process of knowledge transfer that establishes certain teaching knowledge to form teaching practice. Assistance to educational institutions, in the Mexican experience (Bolívar, 2006), involves creating an equal relationship between assessors and teachers, so that the communication can give rise to joint reflections on the situation, and shared discussion on the situation and the decisions to be made (Krichesky & Murillo, 2011).

In keeping with previous findings, Montecinos (2003, p. 116) described the professional working groups in Chile. They have been operating in many schools since 1995, as part of the Programme to Improve the Quality and Equity of Secondary Education (MECE-EM), which aims to support the social, personal and professional development of secondary teachers. Under the original design, each secondary school had one or more groups of teacher that would meet for two hours every two weeks (or one hour a week) to share experiences and (in the first year) study activities proposed in a document of pedagogical innovations that they handed in to the MECE-EM. Some secondary schools maintain these working groups under different arrangements (such as by subject or department), as they carry out a range of activities (subject workshops, exchange and production of materials and organization of teaching work in the school).

In Finland, teachers have one free afternoon a week to develop a study programme and carry out group planning. The fact that the national study programme features only general objectives, rather than setting out how to achieve them, means that teachers must work together within educational institutions to develop study programmes and institutional strategies that match the needs of each institution. Educational institutions

within the same municipality are encouraged to work together and share materials so that identified best practices can be quickly disseminated throughout the system (McKinsey & Company, 2007).

2.1. Teaching leadership

As part of teachers' collaborative learning in educational institutions, teacher leadership (expressed in commitment to quality teaching and the achievement of good pupil results) plays an important role.

In South Africa's Western State Province, district literacy coordinators are sufficiently close to educational institutions to identify what does and does not work, and they disseminate their findings to the main district leaders where necessary. Coordinators meet regularly with colleagues and district teams, and meet every three months with the Provincial Coordination Committee. These meetings are used to find solutions to the challenges faced by educational institutions and to share success stories in the work with such institutions (McKinsey & Company, 2007).

These and other experiences show that taking the lead increases teachers' sense of effectiveness in terms of impact on their students' learning and their capacity to motivate colleagues; raises their motivation to innovate in class; and promotes greater self-confidence (Katzenmeyer & Moller, 2001; Ovando, 1996, cited by Montecinos, 2003, p. 119).

In Boston, Massachusetts, teachers, head teachers and education administrators had detailed data on student performance. Boston district leaders reviewed the information and invited teachers and head teachers to talk about the data and set annual targets to improve results through changes to teaching methods based on study groups. Each educational institution defined its annual targets based on the socio-economic status of students (and those with the lowest results received the most support from the district authorities).

In a clear example of the leadership that educational authorities must demonstrate to improve learning, Tom Payzant replaced 75% of the head teachers at public educational institutions in Boston, Massachusetts, during the 11 years he was in charge of the district as a means of improving performance. Between 1998 and 2007, Massachusetts defined a standards-based teacher recruitment and selection system. New teachers are now required to be certified. Boston's professional development proposal includes collaborative professional learning strategies that involve peer support, the use of learning centres and community forums (McKinsey & Company, 2007, p. 47).

In England, the strategy consists in interventions that are in inverse proportion to success, such that more support is given to teachers in the most underperforming institutions.

These examples illustrate the need for leadership to promote teachers' professional development systems that aim to optimize pupil learning. Collaborative practices generate an interest in good teaching. Leading teachers trust that their pupils can learn the best knowledge in the best way. This is what makes a true profession.

2.2. Teaching career

Collaborative professional learning within the educational institution is a joint endeavour between peers and the community. Within the institution, it involves having opportunities to develop one's teaching career without abandoning teaching. There are therefore many experiences of a rotation system, whereby teachers change position to learn different teaching practices and styles with other people (including in the form of mentoring). They also visit educational institutions and analyse relations between the latter and educational authorities.

There are three steps involved in professional teaching careers as a strategy of collaborative professional learning: leadership, teaching and coaching. In Shanghai, a third of each cohort of Education Faculty graduates is selected to spend 100 hours a year working with peers, leaders and coaches. Collegial observation of classroom practices is encouraged. Wages and bonuses are conditional upon achieving academic targets. The teaching career involves meeting these standards and using relevant teaching materials (McKinsey & Company, 2007). This is the philosophy behind the teaching career in Shanghai, as described earlier in the document.

In Peru's Teaching Career project, teachers are selected on the basis of certain criteria to receive a special bonus for supporting and advising new teachers for one year.

2.3. Support from Education Departments

As collaborative professional learning experiences require coordination with education authorities to ensure they are institutionally established, support from Education Departments is extremely important. Gatti, Siqueira and Dalmazo (2011) describe actions carried out by secretaries of state and municipalities in Brazil.

The Teacher's Room project is based on an assessment made by the educational institution as part of its Development Project and teachers' ongoing training activities. Steps are taken to ensure that training actions do not change with the arrival of a new administration. Policy continuity is the responsibility of the Superintendency for the Development and Training of Educational Professionals.

Professional Development Groups are another strategy involving Education Departments in Brazil. Operational since 2009 in Minas Gerais, there are now 850 projects there. They are implemented through meetings in educational institutions and activities to reflect on practice, which all have a positive impact on teaching quality. Problems in the development of these projects relate to bureaucracy in programme administration. To avoid this, the project now comes under the Poços de Caldas Regional Superintendency for Teaching. The Teacher's Room project serves as intermediary, and teaching quality is reviewed using semi-structured interviews as part of a qualitative assessment.

In Ceará, Espiritu Santo, Campogrande and Judaí, teachers write a text about their experiences to be published in a local publication or book. The idea of this is to recognize and value teaching work and disseminate best practices. Education Departments also

have incentives to encourage teachers to engage in best practices and achieve good pupil performance.

An analysis of collaborative professional learning experiences in educational institutions offers wide scope for improving the quality of learning and the professionalization of teaching. Considering the educational institution as a unit for collaborative professional learning recognizes it as an organic entity in which teachers, students and authorities are affected by any change, and where each situation must be analysed to draw lessons aimed at ensuring quality education.

Those inside the educational institution have a huge capacity for learning. For learning to take place, however, the community aspect must be recognized to facilitate participatory experiences in aspects such as lesson planning, teaching practice review, pupil result analysis, school environment and the impact of education policies.

Viewing the educational institution as a learning community, facilitating and strengthening working groups, having leaders that promote quality policies and ensuring teachers' professional development (without abandoning teaching) all offer a viable and promising way forward for education in the region.

3 Strengths and weaknesses of ICT-assisted collaborative professional learning

There is some discussion about the use of information and communications technologies (ICTs) for teacher training, especially in terms of designing collaborative professional learning activities as part of teachers' professional development (Gatti, Siqueira and Dalmazo, 2011). Experiences seem to describe these as strategies within overarching proposals, so that they are learning mechanisms (without their use leading to virtual forms of knowledge).

Some of these experiences were described by Tancredi (2009). The collective blog Open Classroom for New Technologies is a space for networking about the work of a group of teachers and assessors from several teacher centres in Spain. As it is a blog, it is more freely structured than other learning environments, and includes educational resources, participant blogs and the ICT Training Classroom based on the Moodle platform (see http://www.edutics.es/informacion).

The Education Faculty of the University of the Andes (Bolivarian Republic of Venezuela) provides spaces for pedagogical practice and reflection within or outside the university. This complements the blended-learning (b-learning) training and includes virtual publications, links and other resources (see http://www.human.ula.ve/adocente/seminario/index.html).

Also in the Bolivarian Republic of Venezuela, the Ministry of People Power for Education has a National Teacher Training Network. Teachers use telematics and information

technology to exchange experiences and communicate online (forums, chatrooms and videoconferences), as well as sharing individual and group productions that can be transferred to education contexts anywhere in the country (see http://aulavirtual.me.gob.ve).

"Colombia Learns" (from the National Education Ministry) provides subject networks of virtual practice communities where groups work of skills development and improving the quality of primary and secondary education (see http://www.colombiaaprende.edu.co/html/productos/1685/).

The Education Degree at the Virtual University of Guadalajara University has a Metacampus platform that offers courses, study guides, support materials, activity timeline and spaces for communication, interaction and learning such as a library, forums and chatrooms. There are also assessors, distance learning (Metacampus) and a virtual learning environment at http://www.udgvirtual.udg.mx/interior.php?id=248 and https://www.udgvirtual.udg.mx/cas/login?service=http%3A%2F%2Fwww.udgvirtual.udg.mx%2Fpersonal.php.

In Chile, communal workshops to encourage peer learning within groups of teachers in one commune's establishments provided online assistance through CPEIP.[27]

Odasz (1999) and Eisenman and Thornton (1999), cited by Villegas-Reimers (2003), describe the use of online mentors to train teachers during their first year.

For initial training, Darling-Hammond and Rothman (2011) report on the experience of the National Institute of Education of the Nanyang Technological University (NTU) of Singapore in terms of teaching training using ICTs. Candidates learn to teach in the same way that they will expect their own pupils to learn. Each student has a laptop and the entire campus is Wi-Fi enabled. The library and a growing number of classrooms are deliberately organized into round tables with three or four chairs to provide students with places to share knowledge and collaborate. Comfortable areas with sofas and chairs are designed for group work involving teachers and head teachers, with full access to technological support (such as DVDs, videos, computer connections and a plasma screen for people to present examples of their work). During the training, emphasis is placed on teaching for research and problem-based learning, developing collaboration and a series of classroom learning styles.

Future teachers have about 20 hours a week of teaching in this area. Teachers can use non-teaching hours to work with other teachers on lesson planning, observe teaching in other classroom or take part in professional debates and teacher meetings within their educational institution or group.

Argentina's teachers' professional development plan includes the use of new technologies in the form of e-mail, e-groups and virtual platforms to create a tool that facilitates communication and joint working despite physical distances. These have also been

27 *Although the main idea of communal workshops was collaborative peer work, rather than online support, it is mentioned here as evidence of an IT strategy as an educational mechanism (as claimed for this third category).*

used in induction processes in some provinces (Ministry of Education, Science and Technology, National Teacher Training Institute, 2007).

In Brazil (Gatti, Siqueira & Dalmazo, 2011), working groups regularly meet online. This increases communication and enables teachers to share their work. The coordinator is a qualified teacher selected to oversee the project. The coordinator's duties are to plan, implement, support and assess the work of participating teachers in professional development groups. The lifespan of these groups varies, but they tend to last for the academic year.

The lack of collaborative professional learning experiences involving ICTs could be fertile ground for policy-making in the near future, with a view to bringing teachers' professional development up to date with new forms of learning in the modern world.

4 Debate

Collaborative professional learning as part of teachers' professional development raises some technical, academic and policy issues. The technical discussion relates to the public nature of teaching and learning, and the role of teachers' professional development as an option for teacher professionalization. This includes the debate on the compulsory nature of teachers' professional development, the need to support these processes and their links with teacher training programmes.

The academic debate is focused on the nature of teaching practices, the role of reflection in teacher professionalization, the need to link teacher training with contexts and the importance of innovation and the systematization of good teaching and learning methods.

The policy aspects relate to those decisions involving the allocation of time and space for training based on collaborative professional learning. Breaking the isolation of daily teaching practice involves a far-reaching review of educational institutions and the way in which they allocate teachers' academic work. It also requires a consensual way of reaching decisions, so that teaching unions can commit to education policy.

4.1 Technical discussions

Teachers' professional development: from marginal to institutional. Not just any collaborative professional learning activity can be part of teachers' professional development. Activities must be part of a programme with a structured format for professional development with clear purposes, activities and materials, a specific role for each trainer and that can be replicated in different contexts (Borko, 2004).

In this sense, it is part of a professional development plan at the individual and institutional levels (rather than just depending on the teacher's will). Each educational institution and its teachers must have set opportunities (training days, sabbaticals, networks

and bonuses) to exchange experiences, learn from others and refine their skills. In other words, professional development also needs to be institutionalized in some form. Collaborative professional learning is a policy that spreads change from each school out into the system (in order to improve the latter).

Research into the effectiveness of professional teacher development programmes indicates that teachers need active agents (peers or coaches) to update their practices in the light of professional development standards and the progress of their own students. With that in mind, professional teacher development is an ongoing process supported by an infrastructure and considered as a career (rather than just an individual expression of teachers interested in pedagogical development). Producing improvement plans is a collegial task that benefits the priorities and needs set or created by the educational institution.

Efforts to innovate in teaching require the synergy of an enabling institution. As the ultimate aim is change in the classroom, this cannot be maintained indefinitely if there is no support from the educational institution as a whole. This is why one promising way forward is for schools to learn to improve as organizations.

Teachers' professional development: from voluntary to compulsory. Most European Union countries (including Lithuania, Malta, Cyprus, Greece and Italy) require teachers to complete professional development activities and establish how many hours this should take. In countries with no such requirement, development is taken into account for promotions, rises and bonuses (as in France, Belgium and Spain, Eurydice, 2008). The participation of Latin American teachers in networks, innovations or expeditions has not been compulsory. These experiences have come about because teachers wish to take part. Perhaps it is precisely the voluntary nature of the exercise that explains why some collaborative professional learning experiences have not extended beyond ongoing training policies (like the National Teaching Expedition in Colombia). There is a tension between voluntary and compulsory that may limit collaborative professional learning activities in the region. This tension points to the limitations of voluntary development, as the weakest teachers tend to exclude themselves. Compulsory development also has limitations, as teachers can see training as an administrative burden and have no real willingness to learn.

Teaching: private becomes public. As part of professional learning communities, teaching practice ceased to be private and became an issue in the public domain. The aim is to use observations, records and constant reviews among teachers to encourage them to reflect on their practice – thereby ensuring a deeply pragmatic and collaborative teaching practice.

Making a private practice public requires high levels of trust, so that teachers do not feel afraid or ashamed when it comes to asking, taking a risk, innovating, observing others or being observed. It is vital to form learning communities and recognize peers as reliable partners backed by those who provide support for these processes.

Collaborative professional learning: shared spaces for teaching and learning. The success of this learning lies in the possibility for the regular exchange of experiences

to increase feedback processes among teachers by making classroom practice more public and promoting collegiate reflection. The collective participation of groups of teachers from the same educational institution, subject or grade, and this pooling of individual endeavour, links to coherence and opportunities for active and collaborative learning. This in turn impacts the improvement of student performance and knowledge.

Opening oneself up for discussion tests what is happening in the classroom and identifies best practices that easily and quickly become templates to follow. This helps to upgrade teaching by disseminating innovation. Our teaching culture may not be very receptive to this trend that nonetheless features in ongoing teacher training processes.

The mechanisms alone do not change the conditions of teacher learning. Although different ways of organizing teaching and learning practices (where participants use ICTs to interact with a delay (asynchronously) or in real time (synchronously)) do contribute to collaborative professional learning, this is not achieved by the means of delivery. It is vital to go beyond these means and focus on the social dynamics that arise in these spaces, namely new forms of organization, communication, knowledge production and ways of engaging with sociocultural development processes. This emphasis is what forms virtual learning communities, where the intention to share and learn from others is facilitated by asynchronicity and the possibilities offered by the new generation of electronic devices.

Professional development is a black box. This comment in the work of Montecinos (2003, p. 120) highlights the limitations of replicating successful strategies in programmes for collaborative professional learning. The specific activities, content and strategies that a programme can provide to teachers are not replicated in their classrooms in isolated ways. Each teacher takes the new inputs and adapts them idiosyncratically in accordance with previous knowledge, characteristics of the educational institution and the pupils. Assessing the impact of a programme therefore implies knowing its activities but not how the teachers' learning was implemented in class. In addition, some simplistic assessments only flag up the positive aspects of success stories, while ignoring the role of the sociocultural conditions and context of educational institutions. It is thus vital to provide ongoing support and follow-up to teachers attempting to innovate in the classroom.

4.2 The academic debate

The need to systematize and assess activities that promote collaborative professional learning. The various experiences involved many strategies that could be seen as clusters. While there is a central strategy, there are other supplementary ones also. For instance, a learning community develops by using classroom observations, reflective observed practice, subject networking, expeditions to other educational institutions and mentoring. This encourages the spread of collaborative professional learning in Latin American countries, as a result of a tendency towards syncretism and creativity in the design of ongoing training activities for teachers. The challenge lies in systematizing strategies and assessing results to avoid falling into uncontrolled activism.

The need to advance towards new concepts. It is a fact that learning from and being supported and supervised by others boosts the enhancement of teaching practices (Borko, 2004). In addition, learning from teachers of teachers is a strategy conducive to collaborative professional learning. However, there seems to be no clear concept of mentor and the difference between the latter and coach or tutor. The same applies to teachers of teachers.

It is therefore vital to clarify the concepts to ensure that roles are more defined. For instance, the Israeli experience included selecting mentors from teachers in educational institutions to support novice teachers joining the profession (Marcelo, 2008). They form a wide network with ongoing training. The comprehensive study on entry into the profession in the United States shows the relevance of mentors being from the same specialism as their mentorees, as well as highlighting their need for training (not only in subject knowledge but also educational planning and emotional support techniques) (IES, 2010).

These teachers have fewer teaching hours so that they can support and advise other teachers. In Singapore, there are senior and expert teachers to support others in all educational institutions (Marcelo, 2008).

There are Latin American experiences of teachers supporting teachers in various programmes and learning contexts (Vaillant, 2009; Terigi, 2010). In Chile, there are also examples of mentoring as described by Cornejo (Marcelo, 2008), and mentor training in the Catholic University of Temuco (Inostroza, Tagle & Jara, 2007). The OEI office in Santiago has systematized data from such an experience. It is vital to study these experiences now that many education systems are showing an interest in the entry into the profession as part of teachers' professional development and generating educational theory to explain the experiences.

Reflection on the internal structure of teaching practices. The essential aspect of practices within teachers' professional development is the internalization of those practices. It is important for teachers to reflect on teaching and how they teach. Teachers should recognize this implicit structure that provides knowledge on what they do and why, so that they can describe their beliefs, attitudes and values to and with others. Some beliefs need to be changed on the path to becoming an educational professional and upgrading one's practice (Munby & Russel, 1994). In Latin America, reflection on the internal structure of teaching practices occurs mainly in the areas of influence of research groups on teacher knowledge. There is a lack of widespread strategies to form part of collaborative professional learning activities, especially in terms of ongoing teacher training (Adúriz-Bravo, 2001).

Reflective practice? Critical and reflective practice? Many collaborative professional learning experiences during initial training involve practice reflection as a strategy for developing the work of future teachers together and with the help of the supervising teacher (Calvo, 2004). There are also reports of ongoing training experiences that improve teaching practices through research and action (Restrepo, no date; Ávila, 2005). Brazil, however, is beginning to question this method by discussing the need to situate practice reflection in terms of educational policy direction, rather than simply from the exclusively

individual perspective of the teacher's work (Gatti, Siqueira & Dalmazo, 2011). This prompts us to consider that teacher practices also concern policies and ideology, which can often be revealed and taken on critically. It is also useful to question or at least understand education policies before accepting or rejecting them.

Innovation and dissemination. All collaborative professional learning experiences involving observation, analysis and supervision of practice are committed to the quality of learning and student attainment. Good practices are identified, systematized, disseminated and standardized, in order to provide a very detailed class format in terms of teaching procedures. This lesson study approach can be used to disseminate innovation and implement reform processes with a fairly good success rate.

Disseminating innovation is a delicate process as each context has its own particularities that the model may ignore. In Latin America, however, disseminating good practice could be an interesting way of linking teachers' professional development processes with teaching quality and pupil attainment.

Partnerships between the administration and academia. Such partnerships raise the question of how to use the findings of teacher support processes in ongoing training to impact initial training and teacher selection. In Long Beach, the work with teachers in educational institutions is part of the District's education policies, with findings quickly incorporated into the curricula of initial teacher training programmes and California State University (with the District selecting the top third of graduates as its teachers).

These partnerships are uncommon in Latin America. However, they are possible because many experiences show the need to reformulate the curricula of initial teacher training using innovation projects based on collaborative learning (such as teacher networks) (Unda, 2002).

4.3 Policy debate

Teacher participation in reform processes. In Latin America, education policy is often not supported by teachers and their unions. Some European countries (Austria and France) introduced reflection on education reform processes (particularly curricular issues with an impact on classroom practices) as a subject in collaborative professional learning activities. These experiences were successful in terms of commitment to policy proposals and modelling teaching practices on what was required by curriculum reform (Eurydice, 2008).

Replicating this strategy in the region could be interesting, but would require the implementing education authorities to have considerable political support and leadership recognition from teaching unions.

Educational institutions as learning communities. An educational institution's culture involves teachers, head teachers and students. It also reflects the education policy guidelines implemented by the education system through school districts. This situation is taken into account in collaborative professional learning experiences,

in terms of programmes to enter the profession and ongoing training. Educational institutions are affected by, *inter alia*, incoming teachers, the career of longstanding teachers, the institution's plans and pupil achievements. Some collaborative professional learning experiences in the form of learning communities (Krichesky & Murillo, 2011; Bonilla, 2006) therefore focus on analysing the educational institution as a whole and use what happens there to devise strategies that seek to create synergies between members of the educational community and form networks for interinstitutional work.

One essential component of this collaborative professional learning approach is leadership from head teachers and a commitment to education quality. In addition, relations between educational institutions and districts involve head teachers, education authorities and the community under shared leadership (all members of an educational community) seeking the best learning outcomes for students. This shared leadership is a major challenge for Latin American countries, as regional, local or municipal authorities do not always have the same professional staff as in ministries or education departments. Those responsible for policy direction and managing educational institutions are often hired by the latest government, and lack the leadership to commit to decisions aimed at achieving quality public education.

The issue of standards for teacher certification: from poor to good, and from good to excellent. Collaborative professional learning experiences show a quality commitment to pupil achievements. The loops between various educational institutions seek to identify successful practices that can be systematized and disseminated, as well as changing those that do not contribute to optimum results. The step from poor to good, and from good to excellent, relates to the fulfilment of teaching standards that a teacher should be able to ensure.

Certification and accreditation are fairly widespread in English-speaking countries, but are not commonly accepted in Latin America. In fact, teacher assessment generates clashes and countries that have used it as a promotion criterion for teachers have found positive results (Saravia & Flórez, 2005). Standards can be a good strategy for disseminating collaborative professional learning experiences, particularly if this generates a culture of certification of teachers' professional development and teachers see that such practices help them to achieve professional excellence. Many of the region's countries have standards for teacher training. What remains pending is to link these to teachers' professional development, as in Chile's communal teacher training workshops.[28]

The necessary and difficult link between a teaching career and teachers' professional development. Conveniently, there are ways of advancing in a teaching career without leaving the educational institution. The trend in those experiences analysed is towards a teaching career system that involves rotation rather than leaving the school. The best or most experienced teachers can mentor or teach other teachers.

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28 *These workshops critically analysed teaching practices and outcomes, as the Framework for Good Teaching had two domains related to these skills (domain D for professional responsibilities and domain A for teaching preparation).*

Within teachers' professional development, the teaching career has three levels: leadership, teaching and specialist (senior), which are all closely interrelated. This includes accountability based on the setting of targets and objectives. It also refers to rewards for teachers and head teachers who take part in teachers' professional development activities in accordance with set roles and with a view to improving performance (Scotland and Wales; Eurydice, 2008).

Teachers can also further their careers through supervision, which refers to the identification of good practices that can be systematized and disseminated. Supervision involves leadership to support those who need it, with a view to improving learning achievement. The supervisor can mediate between macro-policy and micro-policy, in order to implement the improvement proposals emanating from the education system.[29]

These policies are not easily accepted by the region's teachers. They need to be in the right setting to be implemented property. Teachers also point out that furthering their careers without leaving the educational institution is appropriate when it comes to having their expertise recognized and their wages increased.

Joint lesson planning, changes to the school day and open architectonic designs. Collaborative professional learning experiences, particularly those that take place in an educational institution, require space for the joint planning of classroom activities. This implies having joint sessions as part of teachers' academic commitments. This also applies to peer classroom observations.

The allocation of academic duties in educational institutions in most Latin American countries is determined by administrative efficiency criteria, which makes it difficult to have joint sessions for peer planning and classroom observations. In this sense, any collaborative professional learning strategy requires commitment from the authorities making the relevant decisions, as well as a cost analysis. There is also work to do with teachers, so that they embrace the advantages of removing the traditional isolation of classroom practice.

Need for ongoing training programmes to be shared with and somehow supervised by head teachers (training and supervision are not parallel actions). It is vital to have links between support staff and the authorities in the educational institution where support takes place. It is vital to remember that professional development programmes last a year and involve three to five hours a week (which means that the authorities must support the relevant allocation of time and replacement staff).

Many of the region's teachers' professional development activities fail because they lack the support of education authorities, and sometimes involve clashing with head teachers who do not allocate time or let teachers attend programmes. In many cases, teachers' professional development programmes are marginalized from the school, in an act of resistance to traditional teacher training policies. This hampers or weakens the institutional commitment and support needed for such training to be effective.

29 *Inés Aguerrondo and Susana Xifra (2011) studied supervision reform in Ecuador.*

Policies are implemented under favourable conditions and context. This is why there is research time, practice time and policy time. This applies to programmes being designed in Latin America for those entering teaching. The comprehensive study in the United States (IES, 2010) shows that, while programmes for those entering the profession do not singlehandedly improve language and mathematics outcomes or avoid teacher turnover, they do help form professional identity. This is crucial if teaching is to become a genuine profession in the region, and also to reappraise and empower teachers.

5 Conclusions and education policy guidelines

This section presents some conclusions and education policy guidelines based on a review of the various collaborative professional learning experiences.

5.1. Conclusions

There is a diverse range of experiences conducive to collaborative professional learning from the region and the first world: networks, expeditions, internships, residencies, learning communities, virtual learning communities, working groups, lesson study, reflective practice, senior teachers/mentors/coaches, workshops, advice to educational institutions; projects and cooperative/collaborative use of ICTs.

On the basis of the questions raised by this document, these experiences can be divided into three categories. In the first category, collaborative professional learning focuses on working with others, usually a model or supporter who tends to have more professional experience, good practices to share and a willingness to guide, accompany and support. These processes tend to relate to the entry into the teaching profession.

The second category covers all those experiences that consider the educational institution as a unit where individual, processes and careers meet, such that any change affects the organization (and this is seen as a learning opportunity). The main strategy involved is learning communities, which can be formed through many activities to boost institutional life: working groups, workshops, assistance, observation and reflection on practice, expeditions, networks and projects.

These experiences have a history in the region (Bonilla, 2006), with evidence of the link between advice for schools, teachers' professional development and educational achievement. This trend also harks back to effective schools, which was an education policy in the 1990s that has been researched in Latin America.

The third category is collaborative professional learning activities that form virtual learning communities based on Web 2.0. These tend to be part of other collaborative professional learning activities, in what is a clear example of the difficulty of separating the categories proposed for analysis (which are highly symbiotic).

5.2. Education policy guidelines

Greater collaboration between academia and teachers

There should be more collaboration between researchers and practitioners, in order to integrate their strategies and knowledge of reality in a pragmatic, systematic and rational way. The literature analyses include some interesting examples where classroom situations are used to change the content of initial training for future teachers (Long Beach, Colorado and Ontario, in McKinsey & Company, 2007). This would require the creation of practice observatories and investment in materials for the systematization and access to real situations in educational institutions as a commitment to pupil learning. In the words of Ávalos (2009), we need to invest in proposals that meet the conditions for producing knowledge on training. It is vital to invest in knowledge management if collaborative professional learning is to graduate from experience to policy.

This collaboration could also result in the consensual formulation of standards for teacher training and the selection of mentors and teacher teachers from the top graduates of teachers' development programmes (Villegas-Reimers, 2003; Gatti, Siqueira & Dalmazo, 2011).

Teachers' professional development based on the educational institution

Based on teacher learning, the main lesson was that an educational institution will not improve without individual and collective development. Although some of a teacher's work is solitary, a school wishing to develop needs to create the conditions for individual teacher training to move towards collective learning. This requires new education policies in some countries, aimed at increasing the autonomy of schools in making their own decisions. The leadership of head teachers is key to identifying the change potential that the educational institution can offer in terms of teachers' professional development.

Working conditions for teachers' professional development

For teachers to embrace collaborative professional learning as part of their professional development processes, their task should be made easier in terms of the growing complexity of their day-to-day work. This will not happen unless the existing conditions in educational institutions and public policies on teachers are changed. It must be acknowledged that the possibility of working with others is dependent on frameworks based on an individual way of working, and that collective working requires the gradual construction of knowledge that can be used to put into practice new models of participation in institutional life.

Time for teachers' professional development

It is vital to allocate time for collaborative professional learning, which means that educational institutions need support staff for the spaces where teachers of a certain

subject or level can carry out classroom observations, analyse student case studies, systematize good practices or take part in academic debates.

New models of school organization

The model of school organization that should be promoted is one that maximizes the time that a school spends on its teachers' professional development. An educational institution needs to guarantee certain physical or structural components, to provide the time and space needed for collective work. Along these lines, resources such as study materials, information and external assessors should be provided to help the educational community find itself and develop collective learning. Collaborative professional learning is a good route, albeit a difficult and costly one.

Resources for training with collaborative practices

Collaborative practices do not relate exclusively to a specific moment of teachers' professional development. It is therefore vital to have resources to support various activities conducive to collaborative professional learning at different stages of teacher training. For initial training, it is advisable to set up a fund like Brazil's scholarships for novice teachers (Gatti, Siqueira & Dalmazo, 2011), with a view to securing funding for programmes to support the training of future teachers in the form of internships or residencies to generate knowledge of educational institutions in practice. The promotion of internships echoes the recommendation of Little and Horn (2007, cited by Krichesky & Murillo, 2011), who suggest that collaborative dialogue between teachers should include exchanges to identify, formulate and reconceptualize practice-based issues.

Good information systems

Information systems must meet at least two objectives: collecting and disseminating good teaching practices and good teaching methods. Collaborative dialogues and conversations among teachers should be based on reflections and experiences about what it means to teach and learn in current contexts. In this sense, it is important to point out that the systematic collection of information for subsequent use as evidence is an essential part of this process. It is an efficient way of analysing classroom reality, without the problems that are usually involved in real-time analyses (Marcelo, 2008).

Incorporating innovation into policy

What happened to the National Pedagogical Expedition in Colombia? What became of the teacher networks in some Latin American countries? The State needs to pay attention to teacher movements that promote actions and strategies aimed at collaborative professional learning, with a view to incorporating innovation into education policy. Many innovative experiences do not translate into policy or are limited to the teachers committed to the process the international agencies providing support. As stated by Nóvoa (2009), education movements, teacher mobilizations and experiences that oppose programmes sponsored by Education Ministries have a short life and

their achievements do not progress from innovation to widespread practice (remaining instead as isolated experiences).

Need for policies that support collaborative learning

Most teacher policies prioritize individualism. Individual achievements are used for assessment and promotion. A teacher policy that supports collaborative learning must target the collective and support successful collective practices. Lastly, some education systems are beginning to formulate policy guidelines on teachers' professional development (Argentina's Ministry of Education, Science and Technology, 2007; and some state education departments in Brazil – Gatti, Siqueira & Dalmazo, 2011). It would therefore be appropriate to include collaborative professional learning in these policies.

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III

Part III:
Issues in performance assessment

Assessment of teacher performance – state of affairs

Sylvia Schmelkes[30]

Introduction

Without denying the well-known significant impact of the socioeconomic conditions of pupils' families or the role of context and the environment on learning potential, teachers (and their teaching quality) are certainly the most important factor (in terms of education provision) behind differences in pupils' learning outcomes. Good teacher performance is therefore vital if good results are expected from pupils (as that performance is a requirement for educational equity and quality). There is evidence that students of some of the most effective teachers achieve an additional year's worth of increased learning compared to those taught by less effective teachers (Hanushek, in OECD, 2009). Links have also been found between some teacher ratings and pupil learning, such as verbal and academic ability, subject mastery, knowledge of teaching and learning and teacher experience (Darling-Hammond, 2002). This explains why recent years have seen Latin America and the rest of the world become interested in discovering how to find out about teacher performance for the purposes of assessment. This assessment should be used to improve performance, although the means of improvement may differ: some approaches classify in order to reward or punish, others seek to increase training to change teaching practices.

This document reviews the ways that the assessment of teaching performance is being considered and tackled in regional and international discussions, which leads to some conclusions and recommendations about what the assessment of teacher performance could be like in Latin America and the Caribbean.

General considerations

Teaching is a highly complex endeavour. The circumstances in which teachers make their day-to-day decisions are extremely variable. The teaching process requires a deep understanding of the working context, suitable mastery of teaching content (and particularly a pedagogical knowledge of the subject (Shulman, in Martínez Rizo, 2013), as well as a wide range of teaching strategies. This involves being able to interact and communicate and develop knowledge and practical elements in and with others, all in an environment of freedom, trust, attention, reasoned decision, empathy and authority (Ávalos, 2009). It involves the ability to reason and judge what is or is not appropriate in practice (Abbot, in Ávalos, 2009). All of the above require high levels of teaching competences.

30 President of Mexico's National Institute for Education Assessment.

The purpose of primary education systems – beyond providing access to all boys and girls of that age – should be to constantly improve pupils' learning. This mainly implies improving teaching quality. As stated in the McKinsey report (2007), what does not happen in the classroom does not happen in education. It also involves placing schools at the heart of education policy, as they have a key role in the process of improving an education system. Schools where the head teacher uses good diagnostics and planning for school improvement to improve teaching are more likely to transform teaching practice and improve student learning than those schools where that does not occur (Sammons, Hillman & Mortimore, 1995; Posner, 1997; OECD, 2010). It is therefore also important to assess head teachers. Although this study does not address the assessment of head teachers, it should be mentioned that teaching work takes place in a school context that can promote/encourage improved teaching practice, or be hostile or indifferent in this regard. An assessment of teacher performance would also have to assess the school context in which teachers are working.

The most significant factors explaining pupil learning differences relate to their socioeconomic and cultural background. Assessing teacher performance necessarily involves considering conditions of context and the difficulties posed for professional practice (as teachers working in poverty, with non-native speakers or pupils with illiterate or uneducated parents cannot be considered in the same way as teachers working in schools in socioeconomically privileged areas). As stated by Martínez Rizo (2013), it is not a case of expecting less from teachers working in difficult contexts or with vulnerable pupils, but the context must be taken into account when it comes to comparing or judging. According to Vaillant (2013),[31] in disadvantaged settings the effective teachers should be identified as the ones who can achieve adequate learning with limited resources (as actions must be realistic in the light of the means available).

Teacher assessment makes it possible to describe teacher performance, identify the main strengths and weaknesses, establish the professional qualities, preparedness and performance of teachers (Valdés Veloz, 2000) and set out their training and support needs. However, assessing teacher performance is probably as complex as teaching itself (Danielson, 2011).

1 What to assess

There are many detailed considerations about the basic teaching skills that should be assessed (Ávalos, 2009; Calvo, 2009, Danielson, 2011; and Perrenoud, 2004, to name but a few). These include:

- Knowledge on the aims and purposes of education and its philosophical foundations.
- Discipline-based knowledge, namely that related to the subject(s) taught. Recent research on mathematics teaching and learning in primary education in various

31 *Remark by Denise Vaillant, Postgraduate Coordinator of the Institute of Education of the ORT University of Montevideo, Uruguay, on a previous version of this document presented at the 3rd Technical Meeting of the Regional Teaching Strategy organized by UNESCO in Santo Domingo, Dominican Republic, on 6 and 7 June 2013.*

countries by Carnoy (2012) found that the most significant teaching factor explaining difference in pupil performance was the degree to which the teacher mastered the mathematics taught.

- General pedagogical knowledge, which basically refers to the degree to which the teacher has mastered knowledge about child or adolescent development, how pupils learn and teaching, management and organization strategies in the classroom.

- Specific didactic knowledge, especially of the subjects to be taught. Shulman (in Martínez Rizo, 2013) called this the pedagogical knowledge of content.

- Knowledge of their pupils and the context of work.

A basic skill for any teacher is planning, which involves the ability to design forms of assessment based on set purposes. This ability should reflect the capacity to set achievable goals, design teaching strategies to achieve them, take account of pupil diversity and plan activities that can be used to assess whether the aims have been achieved (Danielson, 2011). Assessment should be used for pupil feedback, as well as feedback for the teacher and a source for practice innovation.

However, the authors agree that true teacher assessment can only take place through the direct or virtual observation of practice (Ávalos, 2009; Calvo, 2009; Marcelo, 2009; Danielson, 2011; Valdés Veloz, 2000). Practice is where planning is put to the test, teachers show their ability to face the unexpected, where their concern for the learning of all pupils appears or does not and where the true craft of being a teacher is demonstrated. While it is true that learning outcomes are the ultimate aim of teaching, and that pupils' results must be taken into account, merely knowing the learning results does not transform teaching practice. Learning outcomes are the result of various processes – of which the most important is teaching (Mancera & Schmelkes, 2010).

Ávalos (2009) suggests a few examples of competences that teachers should consider: recognizing the importance of pupils' prior experience and knowledge; creating an environment conducive to learning; having challenging expectations for pupil learning; encouraging pupils to broaden their minds; checking that pupils have understood content using feedback or information procedures to aid learning; and assessing the extent to which learning goals are achieved. The author develops specific indicators for each example. Schon (in Calvo, 2009) emphasized the importance of reflective practice, and he and Moreno (in Calvo, 2009) refer to the importance of teachers carrying out research into their own teaching practice, preferably in collaboration with other teachers.

As previously stated, pupil outcomes should be considered a key element in assessment efforts. Teacher performance is assessed precisely on the basis of the best learning for pupils. As shown below, however, pupils' learning outcomes cannot just be attributed to the performance of one teacher. It is therefore unfair to assess teachers based solely on learning outcomes, particularly when they concern only one moment in time (as with

standardized assessments, for instance). The authors deem it appropriate to incorporate measures of value added, although these too have been called into question. Others describe the advantage of considering pupil portfolios and exercise books as indicators of their results and progress throughout a school cycle (Little, in Calvo, 2009). Under no circumstances does it seem appropriate to base teacher assessment exclusively on pupils' learning outcomes. It also appears clear that pupil learning cannot be measured through the results of structured standardized tests alone, and that it is vital to include a measurement of complex non-cognitive and cognitive skills. This can only be achieved if assessments include classroom observation and analysis of pupil exercise books and portfolios.

The authors agree that the teacher's professional performance does not end in the classroom. Teachers have clear responsibilities to the school where they work; to parents; to the community they serve; and to the professional associations to which they belong. They should be responsible for their own ongoing training. Those aspects should also be assessed (Danielson, 2011; Perrenoud, 2004).

Some authors affirm that basic conduct needed for planned teaching to result in learning cannot be taken for granted. This includes punctuality, attendance and use of teaching time (Valdés Veloz, 2000; Mancera & Schmelkes, 2010). In countries with as-yet-unconsolidated education systems (as in Latin America), assessment must include aspects such as teacher attendance, fulfilment of basic obligations, maintenance of a safe and healthy environment, pupil care and so forth (Martínez Rizo, 2013).

Although it is rarely mentioned, it is vital for teaching practice to always be assessed in terms of equity (or the teacher's ability to plan, create a classroom environment and teach to a diversity of pupils in an attempt to achieve learning outcomes for all students). All groups are heterogeneous, with pupils of differing talent, intelligence and rates of learning. Many countries have groups with students from different cultures and mother tongues. Teachers must be able to achieve learning aims with everyone, and this requires providing special attention to groups of students or individuals. Each area of teacher performance should include standards that relate to equity, define good equity practices and describe progressive levels of attainment for each one (Mancera & Schmelkes, 2010).

2 Models of assessment

Processes to formulate systems or mechanisms for assessing teacher performance

Teaching performance assessments fulfil one of two purposes (or both), and the design of assessment processes depends on the ultimate aim: assessing teachers for a professional title, entry into the profession, to keep a post or get promotion; or to guide professional development. The former type is known as high-stakes assessment, and the latter are called low-stakes assessments.

In high-stakes assessments, teaching standards are used for the strict regulation of the teaching career. In contrast, low-stakes assessments are used to diagnose teachers' classroom performance and establish ongoing training and support paths, with a view to improving or strengthening teaching practice (Barrera & Myers, 2011).

The distinction between low-stakes and high-stakes assessments is not clear-cut. Low-stakes assessments can also provide input for teacher improvement and for distinguishing good, average and poor teachers. This will include aspects used to define rewards or to situate teachers in different salary grades. Low-stakes assessments can also have consequences in the long term. For instance, if a formative assessment leads to professional training processes and recommendations and a teacher does not show progress following one or two more assessments, he/she could be reprimanded, punished or even dismissed.

The most serious efforts to assess teacher performance described in the international literature are those that begin by defining what is meant by a good teacher and good teaching, and then move on to formulating teacher performance standards. The best standards are those that send clear messages about what is expected of teachers at various levels of performance. For Danielson (2011), good standards specify those aspects of practice that research has shown to effectively promote pupil learning. She states that practice standards contribute to the recognition that teaching is a profession, and that like other professions it can define itself through what its experts know and do. Having a clear framework for teaching facilitates teacher assessments that are systematic and coherent: teachers know the basis for the assessment and can prepare accordingly. When teachers know what is expected of them, they can commit to self-assessment, reflective practice and a structured professional dialogue. In assessments, having clearly defined teaching competences makes it possible to align these with practices. Vaillant (2013) states that teacher assessment acts as an ordering factor for teacher policies. The implementation of an assessment system necessarily involves initial training, teachers' professional development, working conditions and dialogue or bargaining processes between various groups of actors (unions, governments and teachers). Vaillant says that the ordering effect of an assessment system should not be underestimated, as this is often its main contribution.

The concept of "standards" has generated considerable debate. On the one hand, it smacks of uniformity, interchangeability and control (for product and/or process certification), and this clashes with the vision of education as a complex, contextualized and varied process that cannot be reduced or simplified. However, the alternative interpretation sees the standard as a benchmark (namely its original meaning as a banner) that clarifies and unifies a vision of an idea. Based on this interpretation, educational standards are mainly used as a basis for formative assessments aimed at improving teaching performance (as they define how close or far the results are from the ideal benchmark set) (Barrera & Myers, 2011).

Ingvarson (2002) considers standards as a tool that can boost the teaching profession, and sees them as much more than a means of control. A standard should answer whether it is fair and reasonable to expect what is demanded from teachers (and this absolutely must apply in any school or establishment). It is important for standards to be context-free. It must also be clear if evidence can show whether the standard is met,

as it must refer to aspects that can be observed in teachers (when they present their knowledge, teach in class or reflect on a subject).

Standards should define what society and teachers themselves value in a teacher. They should assess what is considered "good" teaching (Danielson, 2011; Vaillant, 2010). Standards must be clear about what teachers should improve over time, and what they should achieve during initial training or improve throughout the various stages of their teaching career (Ingvarson, 2002). Standards should also be defined with the participation of teachers (Ingvarson, 2002; Mancera & Schmelkes, 2010).

Standards should have at least four characteristics: (1) cover all defined areas of teaching (with indicators for each); (2) establish different competence levels for each aspect defining the areas of work of the teacher and school; (3) reflect core behaviour that can be observed in all teachers in every school (irrespective of conditions and circumstances); (4) define and implement the achievements and outcomes expected from good teaching (without prescribing the practices that teachers must use to achieve them); and (5) be dynamic (in other words, be reviewed regularly with teacher participation) (Mancera & Schmelkes, 2010).

Australia, United States and Canada are some of the countries that have made efforts to define standards (or criteria) for good teaching or professional performance (as a policy benchmark) (Vaillant, 2010). Studies carried out into the use of the Danielson model **in the United States** have demonstrated that the system is as valid as it is reliable. Teachers with good results in the assessment system have also made significant progress with their pupils' results in tests (when compared with the outcomes in the control groups) (Milanowski, Milanowski & Kimbell and Milanowski, Kimbell & Oden, in OECD, 2009).

In the 1970s, the **Australian** Schools Commission proposed that teachers' professional practice should be regulated by rules established by teachers themselves, arguing that professional development should be largely the responsibility of the profession (Vaillant, 2010). More than 20 associations developed their own standards: some aimed at defining the work of recently graduated teachers, others to define the work of more experienced teachers and others still to define the work of leading teachers (Ingvarson, 2002). Then, academics and education professionals insisted on developing standards to improve the training of primary teachers. Changes have been made to policies and strategies on the assessment and regular certification (for those with Masters degrees) of teachers since the end of the 1990s. Documents were drafted to detail what was expected of teachers at each of the four levels of professional development: novice, experienced, leader I and leader II (Vaillant, 2010). For Ingvarson (2002), the key role played by teachers is vital, as it is difficult to ignore teacher associations when they have their own standards (and the latter gives them credibility).

Canada has several initiatives for teacher assessment, including Alberta Province's Teachers' Growth, Supervision and Evaluation Policy. This assessment model is directly linked to the three stages of the teaching career. In order to progress from one stage to another, the teacher or head teacher requests the assessment. The head teacher must explain the reasons why to the teacher. Once the assessment is completed, the head teacher hands the teacher a copy so that the latter can devise a professional development or career plan.

The United Kingdom has a long tradition of policies aimed at improving the quality of teacher performance, and has generated standards and criteria that training institutions must use to train new teachers. Qualified Status refers to the set of standards that accredits teachers based on knowledge, understanding, values, teaching practice and exercise of the profession (Vaillant & Rossel, 2010). The maximum wage can be reached in five steps. After that, there is a higher scale based on eight nationally agreed teaching standards. These relate to teaching and assessment issues, pupil progress and professional effectiveness and qualities. Head teachers were trained to carry out the assessments, and results are confirmed by an external assessor. Assessments are annual. In order to meet the threshold, teachers must demonstrate substantial and steady performance, as well as contributions to the school (OECD, 2009).

For Latin America, a review of the situation in seven countries uses three aspects to define teacher effectiveness:

(1) Knowledge – verbal and written communication skills; knowledge of subjects taught and pedagogical methods to teach the subject to students; knowledge of a range of pedagogical strategies and which ones are appropriate and effective with students and when; understanding of pupils' linguistic and cultural background and the best way to maximize learning for various needs and characteristics; knowledge of how to organize and manage the classroom by using time effectively; knowledge of how to assess student learning (formally and informally) and vary teaching based on those assessments; knowledge of how to choose and produce resources suitable for pupil learning activities; and an understanding of the linguistic development and developmental stages of the children being taught.

(2) Attitudes – respecting pupils irrespective of background, language and ethnicity; having high expectations for the learning of all students; seeing pupil errors as windows on their thinking that can be used to improve learning; reflecting on their own practice; believing in collaboration with others to achieve shared learning objectives; being receptive to parents and community members becoming involved in the classroom; being enthusiastic about continuing to learn and improve their practice; and having commitment to their profession.

(3) Performance – developing classroom rules with students and maintaining safe and orderly classrooms where all pupils are treated with fairness and equity; making effective use of general classroom time and the time of individual students; using effective teaching techniques (lesson planning, clear presentation of new material, helping pupils relate new learning to previous knowledge and providing guided and independent practice for new content); giving students the chance to be actively involved in their own learning; responding to pupil errors in a positive way that helps them to understand and learn the concept in question; using formative assessment to adjust teaching and diversify it in accordance with individuals or group of students; creating warm and worthwhile bonds with students; and providing a classroom environment that promotes an interest in learning (Hunt, 2009).

Mexico has not defined teaching standards. For Santiago et al. (2012), the general framework is complex and fragmented. Improving teacher quality is not at the heart of the process, and there is an overreliance on using standardized pupil attainment tests as the main instrument. As these tests are not sat by all pupils (first and second primary grades and various secondary subjects), they do not afford the same opportunities to all teachers. There is no clearly defined teaching career. There is no observable link between teacher assessment and professional development, and there is limited involvement on the part of State authorities and head teachers. Santiago et al. (2010) state that Mexico's vision has not yet taken on board the fact that improving pupil learning and enhancing teaching are the ultimate objectives of assessment. Assessment is seen as control, rather than feedback for improvement. Despite this, Barrera and Myers (2011) observed many instruments that act as de facto standards, or benchmarks that indicate the knowledge, skills and attitudes that aspiring or practising teachers are expected to have or develop. These de facto standards regulate the teaching career. In "normal schools" (teacher colleges), entry is dependent on standardized knowledge tests identical to the entry examinations for universities. During the fourth and eighth semester, there are standardized tests on specific knowledge (with non-public criteria). The competitive examination for entering the teaching profession is a standardized test measuring intellectual skills and programme content (as well as teaching skills). The review of the teacher portfolio is not based on clear criteria. For entry into the teaching career programme, which was introduced in 1993, a professional preparation examination assesses knowledge of curricular content and regulations. In order to progress in the teaching career programme, standardized refresher tests assess mastery of the curriculum for the relevant course. Pupil results in the census-like annual standardized tests (ENLACE) for all third-grade primary to final secondary grade pupils account for 50% of the grade for entering or progressing in the teaching career programme (Vaillant, 2010)[32].

Cuba is very focused on pupil results. Teachers are assessed on a monthly basis using collective exercises involving unions and students. This is a pedagogical and political process, as shortcomings must be demonstrated and proved for improvement to take place.

Chile has three programmes for teacher quality assessment. The first is the System for the Assessment of Professional Teacher Performance, which has been operational since 2003. It is compulsory, and every four years it assesses teachers in municipal schools. This teacher performance assessment system is formative, and its aim is to guide the necessary improvements in teachers' pedagogical work and stimulate ongoing development processes. It arose from a broad consensus among teachers, municipalities and the government. The system has consequences and is enshrined in national law (with the corresponding regulations). It is based on an assessment model based on performance standards that come under the Framework for Good Teaching. The standards cover various areas of teacher development and four assessment instruments: (1) self-assessment; (2) reference report from the head teacher and technical director; (3) interview with a peer assessor (note the presence

32 *What is said in this paragraph was true when the paper was written in Spanish, in 2013. Things have changed very much since then, since Mexico launched an education reform one of whose pillars is precisely teacher assessment.*

of peers as assessors); (4) portfolio of two modules: planning, implementation and assessment of a teaching unit; and recording of a lesson. Teachers are ranked into four levels: outstanding, competent, basic or unsatisfactory. Based on their results, they can volunteer for a variable allocation for individual performance (if they are judged outstanding or competent), and for this they must submit and pass a written test on subject-based and pedagogical knowledge. Teachers judged basic or unsatisfactory must carry out professional learning and retraining through further professional training plans, and must be reassessed every one or two years. Should they continue to fail to meet the minimum standards for two consecutive assessments (for unsatisfactory teachers) or for three consecutive assessments (for basic teachers), then they cannot continue teaching in the public school system (Manzi, et al., 2011).

The second is the Teaching Excellence Allowance (AEP) programme. As with the professional teaching performance assessment system, it is based on the Framework for Good Teaching and was created with teacher participation (resulting in four levels of teacher performance). It aims to certify teaching excellence of teachers working in classrooms. It is voluntary and free for teachers working in municipal schools or subsidized private schools (Vaillant, 2010). The assessment consists in a written test on pedagogical and subject knowledge, as well as a classroom teaching portfolio (including a video). Pupil tests are not used. Teachers can receive an extra wage for excellence. Once they receive the reward, it is maintained for four years (after which time they must be reaccredited to continue receiving the allowance) (OECD, 2009). The third programme is the National Performance Assessment System (SNED), which has been operational since 1996. This System makes a biannual selection of the best performing schools in each region, with a view to rewarding and encouraging actions to improve the quality of education. It is a collective incentive at the school level, and therefore involves collaborative actions and the pursuit of shared of objectives (Vaillant, 2010).

In Colombia, teachers formally enter the teaching career after one year's internship, and from then on they are annually assessed by head teachers or higher authorities. Assessments lead to a development plan and goals for the following year. Teachers are assessed annually to check compliance with these goals. There are three stages, with the first assessment carried out at the end of each academic year. Teachers who score 60% and above on the action and skills assessment can become part of the teaching hierarchy. Those who do not make the grade must leave teaching. The second stage corresponds to a compulsory annual assessment of pedagogical and appraisal skills and strategies, management of teaching in the subject or grade taught, problem-solving skills, level of knowledge and skills related to the school curriculum, general attitudes to students, management of group relations, treatment and handling of student behaviour, sense of institutional commitment, concern for improving the quality of education and achievement of results. The third stage is voluntary, and is aimed at teachers desiring to be promoted up a grade. Teachers with good results are candidates for a pay rise or promotion (Vaillant, 2010).

Peru implemented a major reform of the teaching career in 2012. Assessment of teacher performance is now compulsory for all public-sector teachers at least once every three years. Appraisal is carried out by an assessment committee made up of

the head teacher, head or academic coordinator for that grade and a peer teacher from a higher scale (with variations in the case of single-teacher and multigrade schools). Committee members are certified by the Ministry of Education, which also defines the assessment criteria and indicators on the basis of the Framework for Good Teacher Performance. Assessment takes place through direct classroom observation and an interview with the teacher about his/her self-assessment. Commitment to the institution and the community is also assessed. Teachers who fail the assessment must take part in a six-month further professional training programme organized by the Ministry of Education or specialized agencies. At the end of the programme, the teacher takes part in a special performance assessment. Another failure leads to a second further training programme, followed by another special assessment. Failing the second assessment leads to dismissal from public teaching. There is also a voluntary promotion assessment that has two phases: the first assesses discipline-based knowledge based on the subject and level taught, as well as mastery of pedagogical theory. The second phase assesses the quality of the teacher's work performance based on the results of the compulsory assessment (this has the heaviest weighting), professional training and other aspects (Ministry of Education of Peru, 2012).

Other ways of defining processes assessing teacher performance are the result of different interpretations of assessment and its purposes. One basic dichotomy is between assessment of teaching and assessment for teaching (Martínez Rizo, 2013), which is similar to the distinction between summative and formative assessment, or high-stakes and low-stakes assessment. Valdés Veloz (2000) categorizes them into binary groups: (1) skills-based versus performance-based assessment: basing assessment on pupil performance implies that the teacher's ability is simply a sufficient condition for good performance. Assessing teacher capacity directly implies that their abilities are a necessary condition for good performance; (2) development criteria as opposed to uniform assessment criteria. The former rejects the use of uniform criteria to assess novice and experienced teachers; (3) subjective compared with objective assessments. A teacher's performance cannot be assessed without making a judgement. The level of objectivity or subjectivity in measurement varies; and (4) formative in contrast with summative assessments. Systems based on competitive assessments tend to use summative assessment, whereas systems based on development standards tend to be based on formative assessment. The author includes assessments for the purposes of administrative control. As well as the dichotomies listed by Valdés Veloz, there is another more recent example: rewarding individuals versus rewarding collectives. The latter has been introduced to respond to criticism about the effects of individual assessments on competition within teams and the resulting impact on collaborative work. Although this effect can be partly reduced by using criteria-based instruments that do not pit teachers of the same school against each other (but compare everyone against a standard), this can still cause problems within a school if only some teachers receive incentives. In Mexico, the teaching career programme introduced a qualification awarded by a school assessment body. In the first few years, every teacher in schools tended to pass with the highest score. This was then discarded as an assessment factor, and other factors (such as pupil test results) were given more weighting. According to García Manzano (2004), teachers learned to rotate ratings (so that variation was reported but high and low scores were shared out between them over the years). Assessments of teaching

collectives tend to work well and boost teamwork. The criticism levelled at them is that there are always freeriders who work little and benefit from the work of thers. However, this effect is offset by the social control exercised by the group of teachers.

Singapore is considered by many authors as the country with the most complete and complex assessment system. Teachers are assessed by trained observers on how much they support the whole child, from social and emotional development to academic learning; how hard they try to improve their practice; and most importantly, how they work with other teachers to improve teaching practice for the entire school (Darling-Hammond, cited in the Wall Street Journal (2012)). Bonuses of one to three months' wages are awarded on the basis of the annual assessment. There is a planning meeting at the beginning of each school year to set targets for student achievement, professional development and contributions to the school and community; a monitoring meeting halfway through the year; and a final assessment based on portfolios and input from the most experienced teachers and academic directors who have worked with teachers (OECD, 2009).

Switzerland has a four-grade salary system with steps within each grade. General pay rises are automatic but not the move up to another grade. When a teacher has completed a grade, he/she must be assessed to be promoted. Assessment includes self-assessment and external assessment in three areas: organization and delivery of lessons; interaction with pupils, parents and teachers; and participation in teacher training (OECD, 2009).

Vaillant (2010) states that the most successful proposals have been widely accepted because they managed to reconcile the interest in improving education quality with the demands of managing teaching efficiently. In some cases (Colombia, Chile and Australia), teacher assessment has made it possible to improve the understanding of the profession and produce a solid foundation for decision-making; provide support for the effects of change processes; and prioritize an interest in the analysis and appreciation of results achieved by the system as a whole.

3 Actors involved

Governments play a key role in devising assessment schemes, as they set the objectives in terms of nationwide learning indicators (often in the form of legislation). Furthermore, some governments play a direct role in implementing and overseeing teacher assessment procedures (UNESCO, in Isoré, 2010). Local authorities tend to have a role in implementing assessment in the schools under their responsibility. Although local authorities may take part in designing assessment schemes, they tend to mainly be in charge of the teacher assessment measures decided by central government (Ávalos & Assael, in Isoré, 2010).

The participation of school management increases in direct proportion with the level of decentralization in the country. In **Finland**, where the education system is defined by a

very high level of school autonomy, all decisions on teachers (including assessment) are taken within schools (UNESCO, in Isoré, 2010).

Education researchers and experienced teachers often act as expert assessors in that subject (Ingvarson, Kleinhenz & Wilkinson, in Isoré, 2010).

Teachers tend to resist proposals for their assessment. They strongly argue that the circumstances of teaching prevent teachers from changing their practices (Isoré, 2010), or that learning results depend on factors external to the school and their teaching (**Mexico**). Teachers complain that working conditions (that vary according to type of school and target population) are not taken into account, and neither is the working context. They rightly argue that the same cannot be expected of a teacher in a school for urban middle-class pupils with full facilities, and from a teacher teaching the poorest pupils (often without basic infrastructure and teaching materials). There is also resistance due to feeling that union victories may be under threat (these include permanent posts, as in **Mexico**). In **Ohio**, resistance was due to a problem understanding a complex system of standards and indicators that did not make clear what was expected of teachers (OECD, 2009). There tends to be less resistance from novice teachers (Milanowski, in Isoré, 2010). Tenti (2009) found that the critical attitude of teachers was mainly related to the mechanisms and procedures used in assessment. In addition, as assessments highlight differences between teachers, they are opposed to a certain "formalist egalitarianism" valued by the teaching profession. Navarro (in Vaillant, 2010) found that resistance is mainly due to the attempt to link performance assessment and systems to measure the quality of student learning. Resistance is also attributable to the limited ability of education systems to implement assessment results in an organized way or reflect recommended teaching skills in instruments. Teachers claim mass assessment systems fail to capture essential aspects of education practice. There is also resistance when there are limited resources to incentivize good teachers: rewarding too few or rewarding them too little.[33] Participation in dialogue and consultation at the system-design stage avoids such problems in implementation. When teacher performance assessment procedures are designed unilaterally at the superstructure level, this results in a weak connection between administrators and teachers (according to Elmore, Kleinhenz & Ingvarson, in Isoré, 2010). It is also vital to support teachers in understanding and embracing assessment, and it is advisable to implement a pilot assessment before full implementation (Mancera & Schmelkes, 2010). This is even more essential when the professional lives of teachers are to be affected by the assessment process (Isoré, 2010).

Teaching unions are supposed to represent teachers' interests. Heneman et al. (in Isoré, 2010) claim that there should be arrangements for their participation, with a view to reducing initial resistance. These arrangements include broad and ongoing communication with teachers and administrators. In some countries like **Mexico**, however, teaching unions hold 50% of seats on commissions that decide on teacher assessment. For Santiago et al. (2010), this explains why teacher assessment is highly politicized and why its administration is not coordinated at the national level.

33 *Comment by Gilmar Soarez, from Brazil's National Confederation of Education Workers, during a discussion of a previous version of this document presented at the 3rd Technical Meeting of the Regional Teaching Strategy organized by UNESCO in Santo Domingo, Dominican Republic, on 6 and 7 June 2013.*

It is rare for parents to be directly involved in the design or implementation of teacher assessment systems.

In many countries (including **Mexico**), teacher participation is merely a symbolic, representative top-down process, with teachers tolerating the assessment system because its consequences are beneficial to them. In other countries (such as **Peru**), the system appears to be imposed by the education authorities. According to Cuenca and Stojnic (2008), teaching union participation has been limited due to its agenda being mainly focused on wage demands (according to PREAL), the high level of centralized decision-making by the Ministry and because interactions between central government and the teaching union were characterized by conflict and cronyism.

One actor that is absent from teacher assessment processes in general is the student. Vaillant (in Román, 2010) states that students are not expected to pass judgement on their teachers' level of subject knowledge. However, they can and are probably in the best position to identify the teacher characteristics or strategies and teaching styles that do help to motivate them to learn and make that happen. Román (2010) claims that there is a series of teacher characteristics that are particularly valued by pupils, and these relate mainly to the teaching skills of communicating and transferring knowledge, along with aspects linked to attitudes and pupil relations. Students are unparalleled informants and, according to Román (2010), should not be excluded from teacher performance assessment processes.

The most successful teacher assessment systems are those devised by teachers themselves (**Australia**) or those carried out with the participation and agreement of teachers (**England**, **Chile**). An agreement based on what constitutes a good teacher generally appears essential to achieving consensus and acceptance of assessment systems and their consequences.

4 Instruments

Teacher assessment systems have developed various measurements for teacher rankings (credentials, seniority, level of study) to appraise their characteristics and practice in the classroom (attitude, personal characteristics and the strategies, methods and actions teachers use in the classroom and to interact with pupils) and to measure effectiveness (or the extent to which teachers contribute to pupil learning). Different dimensions of teaching quality can be assessed using a variety of instruments: ranking of pupils in standardized tests, classroom observation, assessment by pupils, peer assessment, assessment by head teachers, self assessment, teacher interviews, portfolios, parent assessment and skills tests. In some countries, measurements of value added are applied to standardized tests of pupil learning outcomes (OECD, 2009).

An analysis of the most widely used instruments in various countries found the following (Mancera & Schmelkes, 2010; Isoré, 2010; OECD, 2009):

- Classroom observation. An assessor may observe one or more classes. In **Chile**, assessors review a video of a class sent in by the teacher. It is preferable to carry out several observations over the school year, in order to observe the various strategies used by teachers and to have more information on which to judge performance. The Bill and Melinda Gates Foundation (2013) found more variation among observers than among observations over time. The Foundation recommends having two classroom observers, suggesting that one should be the head teacher (as although they tend to score teachers more highly than external observers, the observations follow the same direction and are more detailed).

- Teacher portfolios. These include evidence of how teachers plan lessons, critical reflection on their own practice, pupil work and classroom discussion on improving performance. They have the advantage of being easily adapted in various situations.

- Teacher self-assessment. This includes a critical reflection of practice by the teacher in relation to each standard. When there has been a prior assessment, this self-assessment is based on a series of headings agreed by the assessors and the teacher for the improvement of his/her teaching practice in relation to each standard.

- Evidence of pupil learning, including examples of their work and other performance data.

- Teacher interviews. A face-to-face dialogue makes it easier for teachers to exchange information and explain why they follow given strategies. Their reasons may not be obvious during observation. At other times, interviews are also useful to give teachers feedback and set objectives for transforming their practice.

- Reports from head teachers, supervisors or authorities on teachers and their practice.

- Knowledge tests for teachers.

- Other information from peers, pupils or parents (possibly through questionnaires).

Countries use these instruments independently or in combination with each other to collect evidence on teaching practice. Each instrument has its own problems relating to methods for collecting qualitative data. They must be well designed, calibrated and have proven reliability among assessors. When several instruments are used, the system's fairness does not lie in each instrument, but in the fact that teachers are assessed using different instruments and the information is then triangulated to collect data on shared and divergent aspects of teaching practice.

Of course, some countries also used standardized pupil attainment tests (alone or in conjunction with one or more other instruments). **Mexico** is a good example, as the most recent changes to the teaching career raised the percentage represented by pupil tests to 50% of the weighting in factors considered in the assessment. To award teachers a special bonus (for groups or individuals), only pupils' standardized attainment test

results are taken into account (Santiago et al., 2009). **Brazil** also uses pupil results as a partial measurement for teacher assessment, while **Germany** uses final examinations for teacher accountability (OECD, 2009).

There is heated debate on whether it is appropriate to use such tests to assess teachers. According to a Wall Street Journal report (2012), Kane says they should be used when accompanied by other measurements, and that measures of value added should be used (rather than gross performance parameters). Chetty described the need to improve the tests currently used in the United States as they measure the easily measurable (but that they should nonetheless be used, in conjunction with other measurements). In contrast, Darling-Hammond claims that they should not be used, as there are huge margins for error (even in the measurement of value added). The National Research Council and ETS have concluded that using the results of pupil tests to rank teacher effectiveness is unreliable, as their results depend on factors outside the teacher and cannot be used for decisions with consequences. The also consider that the tests are not a good measurement of higher thinking abilities and penalize teachers who work with the most disadvantaged pupils. The Bill and Melinda Gates Foundation (2013) used careful experiment designs to find that multiple measurements produced more consistent results in terms of capacity to predict the impact of good teachers on pupil learning than merely considering test results. Estimates of teacher effectiveness year on year are more stable when they combine classroom observations, pupil surveys and measures of value added in pupil tests (rather than the tests alone).

OECD (2009) considers that pupil test results only represent a fraction of the contribution of school staff. This is a powerful reason why teachers resist assessments that include such test results. Furthermore, relying on purely objective measures runs the risk of teachers overfocusing on measured and rewarded activity, to the detriment of other important aspects. Measuring value added also has its problems and limitations. For instance, there is instability between different statistical models, years and groups allocated to teachers (Darling-Hammond, 2002). Given that the success of an assessment system depends on its credibility, measuring value added could jeopardize an entire programme. Martínez Rizo (2011) states that value added models do not give sufficient information on teacher performance (not to mention their practice). Among experts, the current consensus is that the real context of education systems does not make it possible to implement a reliable teacher assessment system based on value added models for several reasons: limitations of large-scale testing not measuring important aspects of pupil performance, including attitude but also complex cognitive skills; vague measurement and instability over time; lack of complete databases for individual follow-up of pupils changing school; and mainly the difficult principle of attributing the promotion of pupils into the next grade to one teacher (when this clearly depends on other factors as well). Even if the information from value added measurements were reliable enough to distinguish between effective and ineffective teachers, this would be enough for summative assessment purposes but insufficient for improvement purposes (as they do not reveal what the best practices are in order to disseminate them).

In addition, using pupil tests to assess teachers causes perverse effects. Besides the above effect of encouraging "teaching to the test" at the expense of other central aspects of education not measured in standardized tests (such as writing, for instance),

it has also prompted teachers to abandon schools for poor students for schools with guaranteed better results (thereby exacerbating what was already an unequal distribution of teachers) (OECD, 2009). In the case of high-stake assessments, there is evidence that Mexican teachers dissuade indigenous pupils who do not speak Spanish well or those with special educational needs from enrolling in school. On test day, there are pupils who do not attend, as the teacher has asked them not to in order to avoid bringing down the average results. One extreme but proven perverse result is overt fraud, with teachers reading out the correct answers to pupils (Schmelkes, 2013, Murmane & Cohen, in OECD, 2009). Santiago et al. (2010) add that teaching time is reduced in order to prepare for the test; there could be improved test results without a better mastery of the subject; and there are negative effects on the use of complex and enriching tasks in the curriculum (in which teachers can really discover what pupils are learning). The ENLACE test in Mexico has had to eliminate almost 30% of exams because of copying (and this proportion is on the rise) (Zúñiga & Gaviria, 2010).

Ingvarson (in Isoré, 2010) describes the broad consensus that it is preferable to assess teachers on their practice (good teaching) rather than their performance (successful teaching).

With this in mind, the education research community has warned against excessive dependence on the results of pupils' standardized tests to carry out high-stake teacher assessments (Isoré, 2010, Darling-Hammond, 2002). The Board on Testing and Assessment of the United States National Research Council recommends not using measures of value added to make operational decisions, as the estimates are too unstable to be considered fair or reliable. The Educational Testing Service concluded that the results of value added should not be used as the main or only basis to make decisions with consequences on teachers. There are many technical problems, and that makes their use unfair (Darling-Hammond, 2002). Heybach (2013) described the disappointment of an advocate of assessments and tests to assess children and children, Diane Ravitch (2010), who now affirms that these instruments (and other aspects of the No Child Left Behind policy) have worsened the education system in the United States.

5 Assessors

In many countries, assessors are supposed to be the most qualified people for this task in the education system: inspectors, head teachers, deputy heads, heads of department and heads of subject. Assessors must be rigorously trained in their duties, particularly when it comes to classroom observations and using that latter to draw conclusions (which requires structured observation guides) (Valdés Veloz, 2009).

The literature describes broad consensus on the need for assessors to receive exhaustive training (Mancera & Schmelkes, 2010). The characteristics expected of assessors are: (1) knowledge of the work done by teachers. In some countries, assessment is carried out by experienced teachers in a district/region other than their own; (2) training in carrying out expected observations in accordance with observation procedures and

standards; (3) independence from the teacher being assessed (to avoid a conflict of interests); (4) collegiate decisions for assessment ranking. Given that teaching is complex, it is preferable for analysis and discussion to take place before the teacher is ranked and the assessment returned to the teacher (Mancera & Schmelkes, 2010). Assessors must also be credible information sources and able to express themselves in a non-threatening way that generates trust on the part of the teacher (Stiggins & Duke, in Valdés Veloz, 2009).

Some countries opt for assessment using internal staff. However, in addition to the problem of the independence of the teacher assessed, there is the issue of head teacher's time in taking on this important responsibility. In contrast, other countries have implemented assessment schemes in which teachers are assessed by peers or teachers, either exclusively (**as in Ireland**) or as part of a panel including the head teacher (**like in France**). Both types of assessor have their own advantages: the former take part on an equal footing with the teachers being assessed, while the latter participate from the perspective of experience (Isoré, 2010).

Teachers assess themselves in countries where self-assessment is used. Parents generally have an indirect role in the assessment process when head teachers' reports include positive or negative claims about a particular teacher. Parents are less commonly used as direct assessors, by means of a questionnaire for instance. As stated previously, pupils are rarely consulted as assessors. Peterson et al. (in Isoré, 2010) state that students respond directly and reliably about teacher quality if the questions are asked in a simple and relevant way.

In the **United States**, assessors are being certified. It has become clear that if assessment has consequences, those carrying out the assessments must have the necessary skills to do so rigorously. It is not enough, says Danielson (2011), to take part in an assessor training session; assessors must be made to demonstrate their abilities.

6 Consequences as reward

For OECD (2009), efforts to improve a school's standards will not amount to much without incentives or rewards for improving practice or facilitating teachers' professional development. A single salary no longer works, as it does not attract or retain good teachers. There are no incentives to work with disadvantaged pupils or in remote, dangerous or poor schools. This leads to increased rates of resignation or turnover in the most disadvantaged schools. Effective performance is not recognized, and this penalizes highly effective teachers and encourages the least effective. Awarding pay rises on the basis of academic grades and experience has a very limited effect on school performance. Studies show that experience has an impact during the first three or four years of teaching practice: the pupil results of these teachers do improve. Beyond that point, however, the effect disappears (OECD, 2009). Among indigenous teachers in **Mexico**, the pupil results of teachers with many years experience were found to be worse than for the younger teachers

arriving in class with new teaching ideas (Schmelkes, 2011). School credentials are no guarantee of better pupil results either, seemingly with the exception of mathematics teachers (where higher grades do impact on the mathematics performance of their pupils) (OECD, 2009).

The big challenge is moving from the single salary to a system that can appropriately assess and compensate teachers in order to promote effective teaching.

There are two types of incentive: those that result in rewards (wage-based and non-wage/financial based), and those that result in professional development opportunities. Below are some examples of the former.

Incentives used to attract highly qualified teachers, retain them and motivate them to perform effectively include: higher salaries for high performing teachers, better salaries for teachers working in disadvantaged areas, career promotion and recognition (in money or in kind) for excellent teachers. Some advocate non-monetary incentives that lead to the recognition and appreciation of a good teacher.[34] There are also negative or punitive incentives, such as the threat of dismissal for underperforming teachers (Vegas, 2006).

However, there is a series of problems with the use of incentives. An analysis of the teaching career in **Mexico** and the National Performance Assessment System in **Chile** by Vegas (2006) found that the impact of teacher-performance incentives is limited by weaknesses in the programme design: only a small proportion of teachers receive an incentive related to improving classroom learning (with the rest receiving it automatically or having no possibilities of receiving it); the scale of the incentive may be too small for teachers to try to improve pupil performance; and the incentive may be insufficiently linked to the teacher's real performance. In Mexico, another problem is that the system uses absolute scores rather than scores from comparable groups, despite it being well known that pupils from poor, illiterate, uneducated homes, or homes that do not have Spanish as a mother tongue will find it more difficult to achieve good results in national tests. Teachers working with these groups may decide that the effort required to compete with teachers from schools with pupils of higher socioeconomic status does not match the potential reward (Vegas, 2006). Santiago et al. (2012) found that the use of raw data in **Mexico's** ENLACE test raises serious issues of fairness among teachers and could potentially compromise teaching practice. There is a similar situation in **Chile**, with over half of Chilean schools classified as worst in their group (and they therefore have never received an incentive) (Vegas, 2006).

Few European countries directly raise pay as a result of good performance. **Romania** has set up a system in which the best teachers can compete for a temporary pay rise, ranging from 15% for one year to 20% for four years (OREALC/UNESCO Santiago, 2007). Other countries (**France, Germany, Greece, Poland, Portugal and the United Kingdom**) do not directly link assessment results with pay, but do link them with career advancement. Some countries link teacher assessments with promotions to management positions.

34 *Comment by Guillermo Scherping, representative of Education International (federation of teaching unions), during a discussion of a previous version of this document presented at the 3rd Technical Meeting of the Regional Teaching Strategy organized by UNESCO in Santo Domingo, Dominican Republic, on 6 and 7 June 2013.*

This is the case in **Spain**, where one of the conditions for being head of the School Board is to pass the teacher assessment process. This also happens in **Australia**. The practice is criticized because good teachers are not necessarily good administrators, and because good teaching is rewarded by removing them from what they do best (Isoré, 2010). In any event, some studies show that non-wage recognition can have major effects on teacher performance, and ultimately on pupil learning (Kaltousins, Andrews, in Valliant & Rossel, 2010).

There also exist special incentives. In **Australia, England** and **Wales**, there are Advanced Skills Teachers appointed based on contribution to the professional development of other teachers. There are also incentives to work in schools in difficult areas. In **Australia** and **Denmark**, these teachers are provided with free housing, a computer and wholesale shopping. In **Ireland** and **New Zealand**, household expenses are paid after three years. In **the Republic of Korea and China**, working in remote areas is a requirement for promotion. There is a similar, but tacit, situation in **Mexico** (OECD, 2009). However, Hanushek and Rifkin (in OECD, 2009) found that working conditions are more important than salary for teachers. Darling-Hammond (in OECD, 2009) also found that large class sizes, infrastructure problems, school timetables and the lack of text books are the reasons for teacher turnover. Once these factors are eliminated, the type of pupils becomes less important in teachers' decisions to leave a school.

There are also non-financial incentives. In **Nicaragua**, good schools have more autonomy (although assessments show that they do not achieve better results). In **California**, good results lead to improved working conditions: support, resources and a say in decision-making (Loeb, Darling-Hammond & Luczak, 2005). In **England** and **Wales**, good results lead to less administrative work and more support staff.

Some authors are concerned that rewards will make the intrinsic motivation for teaching disappear (Rothstein, in OECD, 2009). Others (Eberts, Hollenbeck & Stone; Murname & Cohen in OECD, 2009) question the effects of individual rewards on teamwork and collaborative relations among teachers (which are so crucial for teaching). They also call for school incentives, although they recognize that some teachers can act as freeriders.

Terigi (2009) points out that there are serious problems with rewarding work of differing quality in education: (1) these rewards ignore the variety of good teaching practice and the complexity of assessment; (2) merit-based pay is unsuitable for knowledge-based work that requires collaborative activities to be developed and sustained over time; and (3) from the teaching point of view, systems need to ensure that the performance of all teachers is good enough. She therefore proposes stimulating intrinsic motivation and building a professional environment that can attract and retain teachers: participation in a challenging course; formulation of a project to implement in school; successful participation in a competitive examination; identification of problem areas in school and the construction of mechanisms that encourage problem solving; applications for study grants; and assessment of a novice colleague.

7 Consequences for professional development and the improvement of teaching practice (or what to do with assessments)

The important part of assessment is the improvement of teaching practice, because this is the only way to improve pupils' learning outcomes. It may be necessary for teachers to feel recognized and rewarded for their work, and this combined with ongoing performance rewards can be sufficient motivation for improvement. This is clearly the aim of assessment used to identify potential room for improvement in practising teachers and make this happen via training and pedagogical support projects (namely formative assessment).

Summative assessment provides essential information on a teacher's practice and performance (in relation to a definition of "good teaching"). As a result, summative assessment is an essential source of information for making teachers responsible for their professional performance. This type of assessment makes it possible to compare teachers, which is useful for decisions on hiring and staying in post, promotion opportunities or measures to apply to inefficient teachers. Such assessment can also be used as the basis for recognizing and rewarding teachers' work (Isoré, 2010).

Formative assessment is aimed at identifying a teacher's strengths and weaknesses, as well as providing opportunities for suitable professional development. The role of formative assessment is precisely to determine how to improve teaching practice. It involves assessors providing teachers with constructive feedback (Isoré, 2010). The quality of the information given to teachers following an assessment process is key. In **Chile**, for instance, individual technical reports detail strengths and weaknesses in relation to the various criteria of the Framework for Good Teaching used for assessment. This also involves the education system developing accessible training and development mechanisms.

The assessment of teacher performance can be seen as both formative and summative at the same time: it distinguishes between good and bad teachers and it recognizes and rewards them, thereby motivating and providing formative opportunities to improve practices based on weaknesses revealed by the assessment.

Martínez Rizo (2013) claims there is little evidence that professional training activities make any difference. Martínez Olivé (2009) found that many ongoing training programmes have proved useless, serving only to complicate an already demanding daily teaching situation. Martínez Rizo (2013) recommends long-term, theoretically supported programmes, based on the work of teacher learning communities. Martínez Olivé (2009) suggests avoiding course/seminar/activity consumerism that currently characterizes the training market (which is fed by teachers constantly feeling out of date). She suggests building collective work networks to support training activities based on collaboration and professional dialogue that are relevant to the school's reality and the problems experienced by teachers.

There is a preference to no longer distinguish between initial and ongoing training, but rather to consider all training as a teachers' professional development continuum (Terigi, 2008), to which performance assessment must contribute. Assessment, professional development, teacher training and recognition/incentive schemes must go hand in hand to ensure that assessment provides inputs for training, there is the possibility to identify and recognize good teachers, and that incentives are linked to classroom performance (Vaillant, 2009). Without a link between assessment and professional development opportunities, the process is not enough to improve teacher performance (and usually becomes a meaningless exercise approached with apathy or mistrust by the teachers assessed) (Danielson, Milanowski & Kimball; Margo et al.; and Pochard, in Isoré, 2010). Assessment should be used as an effective way of motivating improvement in teaching practice.

In several Latin American countries, professional development increasingly includes a variety of formal and informal experiences. **Mexico's** PRONAP combines various actions (short refresher workshops (classroom based or self-taught); special assistance in teacher centres; and longer courses) aimed at providing a continuous and permanent provision of quality training programmes. There are also policies to promote school-based professional development for teachers based on difficulties and problems identified by the school team. As part of autonomous professional development in **El Salvador**, teachers develop a professional development plan and then use a voucher to buy private services. There is an issue pending in terms of matching schools' needs with the proposals that come from education policy (Terigi, 2008). In Bogota, **Colombia**, teachers are offered in-service training that transcends the idea of teachers only learning on courses. The country's ongoing teacher training programmes are linked to professional practice and seek to impact research training in the school and the classroom (Isaza & Torres, in Calvo, 2009). In **Brazil**, **El Salvador** and **Chile**, there are programmes to encourage learning while teaching (Navarro & Verdisco, in Calvo, 2009).

8 Conclusions

(1) In education provision, teachers are still considered the most important factor in explaining differences in pupil performance. This explains recent interest in assessing teacher performance in almost all Latin American countries (as well as many others worldwide).

(2) Little is still known on the real possibility of assessing performance to distinguish a good teacher from a bad one. Vaillant (2013) states that researchers have not yet developed the instruments, measurements or data sources to identify with certainty those aspects of teacher quality that are the most important for pupil learning. What is more, there are doubts about the extent to which various models in use provide a fair measurement of performance. There is therefore resistance from the academic community and researchers to using teacher performance assessments as summative assessments with immediate consequences for wages and/or the teaching career.

(3) Teaching assessment experts are convinced that the main purpose should be to improve teaching practice (thereby enhancing pupil learning). The relationship between the former and the latter has not yet been fully established. Despite this, teacher assessment does give an idea of the strengths and weaknesses of what a teacher knows and does (and this can be used to improve his/her practice). The most sensible sounding education policies therefore appear to be those that use educational assessment results to design training and support processes for working teachers to improve their practice. In order to distinguish between good and bad teachers and suitably recognize the former, perhaps the capacity for improvement in teaching practice between two assessment periods could and should be used with consequences (provided that this involves training and support systems for teachers seeking to improve their weaknesses and sufficient time to incorporate this into practice).

(4) It is therefore vital to consider that assessment alone will not be able to improve the quality of teaching practice (or pupil learning for that matter), and that assessment needs to be linked to effective training processes.

(5) There is also consensus in the academic community that assessment has to be based on clear parameters of what is meant by good teaching. This defines levels of proficiency in teaching practice and the aspects of performance to be assessed. Levels of performance based on this definition must be as closely related as possible to better levels of pupil learning and rewards for teachers.

(6) There is agreement that these definitions of good teaching and what distinguishes levels of practice (or standards) must be formulated with teacher participation, as they will thus be able to embrace rather than resist assessment mechanisms.

(7) One key factor in teachers accepting performance assessment is perceiving it as fair. This will not happen as long as teacher assessment is based on measures that cannot distinguish fairly between good and bad teachers. This applies to any isolated performance measurement, but especially to models that rely exclusively on standardized tests for teacher and pupils' learning outcomes as raw data or with measurement of value added. The limited research on the subject clearly shows that these measurements are unstable and therefore unfair.

(8) Another element of fair assessment is consideration for the context of the teacher's work and assessment of his/her working conditions. Teachers can be assessed using common instruments. Formative assessment can support all of them in improving their knowledge and teaching practice. However, an assessment that does not affect insufficient working conditions to develop teaching practice will not achieve much in the way of improving learning outcomes. Any assessment with consequences that does not control for context and working conditions is certainly an unfair one.

(9) Teacher assessments that take account of various factors and that are based on instruments that are triangulated to reach a more holistic vision of teacher performance are key. Live or videoed classroom observations are vital; pupil interviews provide valuable information; and opinion of the head teacher; interviews with teachers and parents; evidence of planning and assessment in teacher portfolios; and evidence of pupil work are all essential. The above combined with tests of teacher knowledge; pupils' learning results; and teacher self-assessment appear to be the best predictor of pupil performance. They are therefore fairer and more easily accepted by teachers. The selection and training of assessors is key here, and it is advisable for teachers to be assessed by a pair of assessors (rather than just one).

(10) The use made of assessment results is also crucial. As stated above, there are two main uses: to guide ongoing training and to recognize good teachers and motivate improvement in others. In the first context, research also identifies the most effective training models for practising teachers. These seem to be those that are closest to schools, are based on each teacher's strengths and weaknesses and use the best teachers as mentors.

(11) The definition of good teaching (and the resulting criteria used for assessment) should involve the entire teaching career, from selection of students to be trained as teachers, their initial training, entry into service and the design of ongoing assessment and professional development.

9 Policy guidelines for teacher assessment in the region

As the teacher is the most important factor in education provision when it comes to explaining differences in pupil performance, assessment appears essential if the aim is to improve the quality of learning. However, in order for assessment to have an impact on learning quality, it must not merely be carried out but should be accompanied by teacher training mechanisms to provide teachers with more subject knowledge and a higher number and quality of elements to transform their teaching practice. Every assessment model is therefore recommended to have its own training model that is implemented immediately after the first assessment.

Assessment should also have consequences, and the most important ones should be formative. Another relevant consequence is recognition for good teachers in the form of distinctions and rewards, with varying wages and different levels of performance.

As teaching is a complex endeavour, its assessment should also be complex. There should be a definition of a good teacher (and therefore of what should be assessed). In order to prevent teacher resistance, the definition should be formulated with their participation. They should also be involved in defining the levels of mastery of teaching (which will in turn define pay grades).

In order to be fair, judgement of a teacher cannot use just one instrument, but must be based on a battery consisting mainly in classroom observation (which may be virtual – in the form of a video recorded by the teacher), self-assessment, interview with the head teacher, survey of pupils and parents, review of teaching portfolio and review of pupil work. Assessment may also include a knowledge test of the subject taught. The literature is clear that pupils' learning outcomes should not be used to measure teacher performance, as pupil results also depend on other factors. Not even measurements of value added appear stable enough to justify their inclusion as a teacher assessment factor. If they must be taken into account, they should be used in conjunction with other instruments.

Fair assessments should also be carried out several times, and this process should involve teacher training on the basis of weaknesses identified. Successive assessments must judge the teacher's ability to improve knowledge and practice. The most dramatic consequence (of dismissing a teacher) should only be applied having established his/her inability to improve over two consecutive assessments after the initial one.

Teacher assessment should be based on the recognition of diverse working conditions. Although assessment applied to all teachers should be based on what is common to all of them (as well as adding specific aspects related to working with certain population groups or subjects), the practice context must be considered and controlled for – so that any consequences are fair. Any assessment must also consider working conditions, and provide the opportunity to assess those conditions, correct irregularities and improve them. Teacher assessment with consequences for the teacher must therefore go hand in hand with an assessment of working conditions with consequences for governments.

The selection and training of assessors are key to the assessment development process. The credibility of the assessment will depend on their suitability and objectivity. Teacher assessments should be carried out by two assessors, preferably on site. The assessments should then be reviewed by a third assessor who did not visit.

Regular assessments should be compulsory for all teachers. Not all teachers should be assessed simultaneously. Depending on the size and complexity of the country, there can be period (of four years, for instance), where all teachers will be assessed. There should be a relatively long period (of at least two years) between assessments, to enable the teacher to learn and test out practice innovations.

Besides compulsory assessments, there may be voluntary ones for special promotions (to become a senior teacher), to change activity (becoming a head teacher, assessor or supervisor) or obtain one-off recognition. These forms of recognition should not generate competition within a teaching team, but should be based on certain criteria.

Rewards given as a result of compulsory assessment may involve a pay rise. There should also be recognition for teaching teams when the entire school does well in an assessment (to encourage collaborative working). Other forms of recognition may be in kind, including sabbaticals, study grants, trips to discover teaching practices abroad, publication of success stories and so forth.

It seems vital to move towards a growing professionalization of teachers. Assessments should show teachers that governments trust their abilities and professional responsibilities (particularly their capacity for professional development). Assessments should also show governments' interest in the ongoing professional development of teachers, which can only be demonstrated when the authorities offer effective mechanisms for learning and improvement.

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IV

Part IV:

Issues in building public policies on teachers

Elusive politics among volatile teacher policies

José Weinstein [35]

At times, reformers are so convinced that their reforms are technically right that they proceed in politically naive ways (M. Grindle)

Introduction

Howadays, the requirement of quality education for all with no exceptions has become a social demand.[36] This combines the aspirations of ordinary citizens who want (for themselves and their offspring) greater opportunities for social mobility and progression, with the aspirations of business owners, political parties and governments that see no better way of boosting economic competitiveness, social cohesion and democratic citizenship (Tedesco, 2000). This broad consensus on the importance of education and the urgency of change does not, however, imply agreement about the best ways of achieving this (as there is a wide range of education policies in different education systems and a legitimate academic and political discussion under way about which policies are the most effective and relevant for each society).

Teacher policies are not separate from this context of strong pressure for educational change. Indeed, there is a widespread acceptance about the decisive significance of classroom teaching in the quality of pupils' learning and general education (as confirmed by the McKinsey report (2007) on the world's best education systems). It is known and accepted that any education policy will fail without qualified, motivated and high performing teachers. However, the strategies for achieving such a result are not obvious or consensual, with conflicting visions on how to improve the professional quality of teachers in a short time. It is unclear whether the underlying vision of the role of teachers and their desirable characteristics are being understood in the same way (Darling-Hammond, 2012), and also whether the significance attached to the "teacher factor" in pupil learning is given the same weighting as their socioeconomic and cultural environment. Ideas about education policy therefore cover (or drive) teacher policies, and it is impossible to separate them (except as part of an analysis).

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36 *I am grateful to Cesar Muñoz, who worked on documenting the international cases.*

Politics (in the sense of competition for power) and policies (the public response to social problems) are both relevant here. Teacher policy politics refers to the processes and actors that make it possible (or impossible) to devise and implement certain teaching measures as part of current education policy. Questions about the main decision-making dynamics, the education actors involved, the partnerships between those actors and other political/social actors and the characteristics of teacher policy implementation all relate to this overlap between the technical and the truly political. This issue is far from marginal or purely academic. In Latin America, the education sector is hotly disputed, which makes governance difficult and causes huge political problems when it comes to implementing a sectoral change agenda – as a result of resistance to many of the executive branch's initiatives from teachers and other actors. This is demonstrated by high turnover rates for education ministers and hard-hitting teacher stoppage days during the school year. However, there has been limited research in the area, which makes this aspect of the issue somewhat invisible and unaddressed in terms of social and political analysis.[37]

This document aims to tackle this neglected topic and is divided into four chapters. The first chapter tackles the starting point of teacher policies, by attempting to show what qualities these should have and which obstacles they should overcome (as well as the underlying interests and conflicts). The second chapter describes the main actors involved (by presenting the decision-makers and those who influence teacher policies and mapping out the main stakeholders). The third chapter focuses on the dynamics of teacher policy-making by describing the arrangements for this process and making a distinction between policies that originate from a major education policy or reform (and those that do not). The fourth and final chapter contains a series of guidelines containing elements and factors that may help to improve decision-making in teacher policies. The first three chapters end with an inspirational case study from so-called *first world education systems* that achieve good results for all pupils. These can be used to reflect on the situation in Latin America. This is important because the region has been dominated by limited politics, with few successful efforts to build consensus and unite social and political actors behind a long-term proposal to develop teaching and teachers, all against the backdrop of piecemeal and volatile teacher policies that often amount to isolated initiatives partially tackling specific problems that do not last beyond the government that happens to be in office at the time.

1 Teacher policy: dimensions and obstacles

Behind the apparent consensus to assign the greatest weight to the "teacher factor", there are differing ways of understanding teaching that lead to different policies with their own particular obstacles to success. Although it represents a polarized description, the following table based on Hargreaves and Fullan (2012) distinguishes between teaching

37 *Within this issue, the specific topic that has been the most studied in the region is teaching unions (Palamidessi, 2003; Palamidessi & Lagarralde, 2012). Meanwhile, other areas remain mainly untouched, such as the political management and organization of education ministries, the political dynamics of education reforms, the impact of decentralization on power struggles among education actors or how citizens' educational demands are processed by political parties.*

from a market perspective and teaching based on professionalism, to show the tension of what is seen as "good teaching":

TABLE 1. TWO VISIONS OF GOOD TEACHING

Business capital	Professional capital
Good teaching may be emotionally demanding, but it is technically simple	Good teaching is technically sophisticated and difficult
Good teaching is a quick study requiring only moderate intellectual ability	Good teaching requires high levels of education and long periods of training
Good teaching is hard at first, but with dedication can be mastered readily	Good teaching is perfected through continuous improvement
Good teaching should be driven by hard performance data about what works and where best to target one's efforts	Good teaching involves wise judgement informed by evidence and experience
Good teaching comes down to enthusiasm, hard work, raw talent, and measurable results	Good teaching is a collective accomplishment and responsibility
Good teaching is often replaceable by online instruction	Good teaching maximizes, mediates, and moderates online instruction

Source: Prepared by the author, on the basis of Hargreaves & Fullan (2012, p. 14).

This vision of "good teaching" therefore involves knowing what all teachers want to achieve, as well as strategies that should be used to make this happen.[38] As a result the density, problems and complexity of teacher policy would differ depending on which of the two opposing definitions of the ultimate aim were adopted.

Having said that, it is essential to remember that beyond differences in teacher policies, from a systemic perspective they must all respond to a series of interconnected challenges for the teaching profession. In particular, teacher policies should be seen as inextricably linked multifaceted actions if significant targets and objectives are to be achieved throughout the school system as a whole.[39]

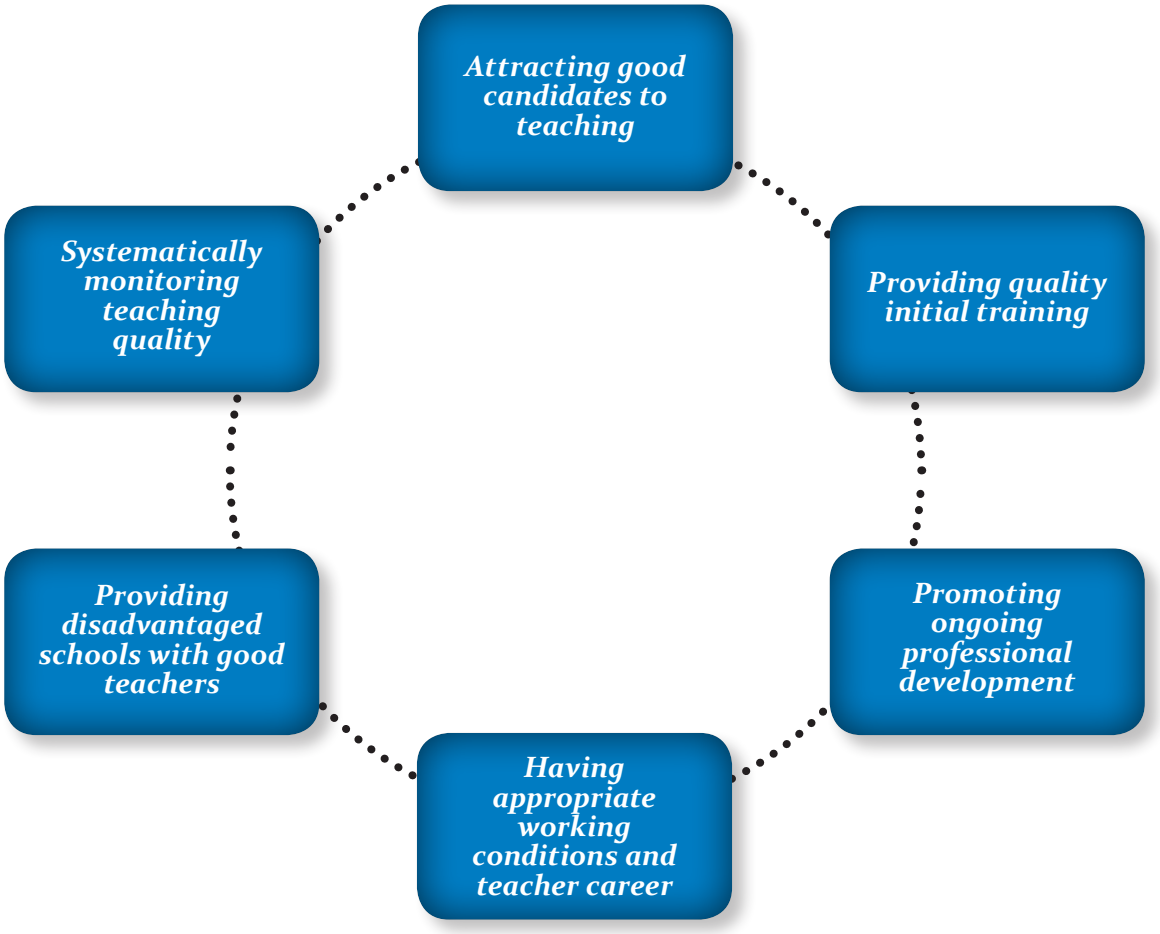
As shown in the figure below, teacher policy should focus on at least six dimensions:[40]

38 *According to some authors, the simplest and most operational vision of teaching involves a neoliberal implementation that would value competition among schools and the introduction of high-stake accountability systems in which the main function of teachers would be to ensure that pupils can respond appropriately to tests of learning (Zeichner, 2010).*

39 *Thus, even the least sophisticated "business capital" vision of teaching must consider the links between the different spheres of teacher action (in order to be successfully implemented in a given education system).*

40 *This classification is based on the SABER initiative (World Bank, 2012), with some categories combined to leave six main categories (rather than the original eight).*

FIGURE 1. DIMENSIONS OF TEACHER POLICY



Although each dimension is independent to some extent, some clearly influence each other (which is why education ministries rarely act on just one or two). For instance, attracting good candidates to teaching is boosted by an attractive teaching career associated with suitable working conditions. Evidence from the constant monitoring of teaching equality can be used to introduce initiatives to encourage ongoing professional development. Similarly, the system may have relationships operating in the opposite direction: failure to succeed in one dimension has a negative impact on another. The two cases of links described as positive could also be seen as negative, and one can imagine the demoralizing effect for good teaching candidates to arrive in mediocre and unprofessional teacher training colleges. It is also impossible for teachers to undertake ongoing professional development when they lack satisfactory working conditions. This can lead to a lack of motivation and may even force teachers to seek paid activity outside the classroom. Beyond these direct boosting or deflating links, the relations between various teacher policy factors can take many forms. The SABER initiative involving empirical evidence from school systems with teacher policies of a proven standard proposes a less linear possibility: some school systems can have successful policies by blending these dimensions in various ways. For instance, considerable investment

in attracting good candidates and initial training makes constant monitoring of teaching quality by an external entity much less relevant.[41]

As well as being internally coherent, teacher policies also need to be aligned with the major objectives of education policy. In this sense, many school systems have endeavoured to improve the general quality of teaching, as well as enhancing equal education opportunities for various social groups. Given this overarching framework, each target within teacher policy should have a clear and reasoned link in terms of its impact on teaching quality and equity. In some cases, the link is obvious, as with good initial training and appropriate professional development impacting on teaching quality, or when attracting and retaining good teachers in disadvantaged schools has an effect on equity. In contrast, other cases depend on how teacher policy is implemented and whether priority is given to aspects with proven links to quality and equity. Some popular measures bear little relation to quality and equity (such as teachers having a totally individual choice about their training) (Fullan, 2007),[42] while others are decisive (such as the extension of non-lesson time and collective work among teachers). The question that should not be ignored when it comes to making a decision on teacher policy is precisely what implications if will have on improving the education of all pupils (and particularly the poorest).[43] Underlying this is a form of action theory (World Bank, 2012), and this should be made explicit to find evidence for support and analysis, and to be able to attribute any future results.

In terms of the policy itself, it is worth exploring the various kinds of policy obstacles in each area. Many reformers (be it the State, union movements or public opinion) want the teachers' situation to change, and yet change is difficult to achieve. Why is this? In principle, who opposes having the best candidates enter teaching; education facilities providing excellent training; teachers receiving systematic incentives for professional development, professional career progression and good working conditions; the best teachers going where they are most needed; and a robust system to monitor teaching quality in the schools and classrooms of the education system?

The explanation for this policy gap (or the distance between the discourse of consensus and the materialization of effective change) appears to be due to the major obstacles in the way of developing teacher policies. There are at least four types of obstacle: financial cost, institutional capacity, cultural stumbling blocks and political leadership. Let us examine each one in turn.

In terms of **economic and financial costs**, the great number of practising teachers means that almost any measure implemented will have a major impact on public finances. The appropriation of the fiscal burden of teachers' pay rises means that any wage increases tend to be moderate and gradual (with no way of introducing rapid changes

41 *As in Finland (more details below), pedagogical leadership by head teachers in their schools is less significant thanks to the higher quality of classroom teachers (World Bank, 2012). This reflects the findings of Mourshed, Chijoki and Barber (2011), whose comparative study of education systems that made the most progress in terms of quality in the past decade showed that the professional quality of teachers reduced the need for external monitoring and control systems regarding their work.*

42 *According to Scartascini et al. (2010), this feature of the most effective public policies relates to their public interest objective, without being captured by any specific interest group to force through its own agenda.*

43 *See the annex for a specific example of teacher policy measures (based on education policy objectives) resulting from negotiations between the Ministry of Education and the teaching union in Chile in 2000 (Weinstein, 2006).*

in a fiscally responsible way).[44] During economic recessions, the financial impact of teachers' salaries has resulted in their being frozen or – through "natural selection" – chosen to bear the brunt of cuts. The large number of teachers also places a high cost on non-salary measures to benefit them, such as the provision of high-quality ongoing professional training, allocation of more non-lesson time in the working day or the introduction of special retirement and early retirement schemes. Furthermore, fiscal prudence is essential because these measures tend to be recurring expenses, and so once adopted become part of the regular budget and teachers' acquired rights. Financing teacher policies is therefore a crucial political decision that requires a country to prioritize a medium- or long-term commitment akin to an industrial policy (over and above the needs and urgent requirements in other sectors and fields).[45]

Even when financial resources are available, these alone are not enough. The successful implementation of any policy requires **institutional capacities**, and these cannot be developed quickly or in a linear way (Levin et al., 2008). Initial teacher training is a case in point. There may be government willingness to transform education faculties and the professional quality of graduates, and this could even be promoted through a large-scale public programme. However, ensuring change is a more complex process that involves altering curricula, drafting in new teachers, integrating new research practices, forging links with schools acting as clinical fields and adopting graduation standards to guarantee the knowledge and skills of future teachers (Darling-Hammond, 2012). In this process of institutional change, the executive branch cannot ignore university autonomy (and any policies would therefore have to be compatible with university policy, regardless of whether they took the form of voluntary higher education initiatives or new legal requirements restricting their independence and making compliance compulsory). The complex nature of developing institutional capacity also applies to schools (as they must have head teachers with the elusive capacity for pedagogical leadership) and education ministries (as their analysis and information systems must be able to collect and analyse reliable data on teachers' professional performance in the thousands of schools in the system, as well as having timely and appropriate feedback mechanisms).

Another obstacle is represented by **cultural hindrances**, which is when the values, beliefs, attitudes and practices embraced by various education actors (such as teachers) as part of the prevailing culture are to somehow be incorporated into the sector and may work against the development of some teacher policies. This can be usefully illustrated by the example of the equitable distribution of teaching capacities at the national level. For an education policy to fully meet its equity purposes, it must ensure that the best teachers reach and remain in the most complex and challenging educational settings (which tend to be urban and rural schools attended by poor pupils). It is well known, however, that the reverse tends to be true: the most disadvantaged schools are staffed by novice or undertrained teachers with high rates of departure and turnover (with some posts remaining unfilled). With a few honourable exceptions (due to ideological and/or religious reasons), good teachers do not have a great incentive to teach at those schools, and indeed their services are in demand at middle- and upper-class schools that are

44 *Teachers' salaries usually represent more than two thirds of the total cost of primary or secondary education (see OECD, 2012).*

45 *This is the option taken by countries that have achieved steady progress in terms of education quality and equity. In Finland, for instance, average public spending on education is 6.3% of GDP (and 6.1% of GDP in Australia) (OECD, 2012).*

much more attractive professionally. Even the most promising teachers who start off in poor schools tend to have an aspirational "teaching career" in which they echo the social mobility process by moving from more socially and educationally complex schools to well-established ones with a higher status and better working conditions (Loeb et al., 2010). The purpose of teacher policy therefore clashes with key values in today's society, and with its real definition (rather than just the discourse) of what a successful professional career looks like (which is no different from that of other professionals, at least in societies dominated by a market economy). These cultural hindrances are also visible in other dimensions of teacher policy relating to teachers themselves. One example is when ongoing professional development involves teacher changing their practice and opening the "black box" of the classroom (Elmore, 2010). This also concerns other educational and social actors, such as a lack of family acceptance when very good students choose teaching over other higher status professions.

One final obstacle refers to **political leadership** and the ability to make progress with teacher policies at the decision-making level and also in terms of their subsequent implementation. The complexities of the above-mentioned factors point to the scale of the challenge: robust leadership is needed to support policies that require significant long-term fiscal input, to demand change in existing institutional capacity, and to swim against the tide in terms of perspectives and approaches that are deeply entrenched (at times among teachers themselves). Another political difficulty occurs when choosing to invest considerable resources in teachers, rather than in physical infrastructure (school buildings, nurseries and so on) or in direct pupil support initiatives (food, school supplies, books and grants) – as the latter two benefits are so publicly visible. Furthermore, some teacher policies have an impact on existing interests in education, while other policies can cause a clash between different ideological positions on controversial issues following the formation of powerful coalitions in favour of change (Hopkins, 2008). Such vital political leadership is not easily achieved or maintained over time. The discrepancy between the limited political time that each government has to implement is programmes, and the long time that is technically required to achieve real progress in complex educational and teaching matters (particularly in classroom practices) conspires against the achievement of the ultimate outcomes.[46] Similarly, the current focus on accountability means that teacher policies are not validated by the public on the basis of teachers' acceptance of them, but rather the impact they achieve in a multicausal setting that is as difficult and slow to change as pupil learning outcomes. Political leadership is the most decisive of all the factors mentioned. Although it is a scarce resource and having enough of it is therefore an obstacle in itself, political leadership is also the key to banishing inertia, breaking down resistance and ensuring that teacher policies can become an effective reality in region's school systems.

Below is an inspiring description of Finland, where the world-renowned education system is based on a teacher policy built to last decades and to meet various quality criteria set for public policy (including stability, adaptability and efficient use of resources) (Stein & Tomassi, 2006).

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46 Even this political need to produce results has led to what Richard Elmore (2010) terms the "policy mill", in which each new superintendent takes office by announcing his plans to save education (before being promptly replaced by someone else making a similar proposal). In the United States, there is a high turnover rate, with each period of office not averaging more than two years.

BOX 1:
FINLAND: TEACHERS AND SUCCESS OF THE EDUCATION SYSTEM

Finland is currently considered the world's most impressive educational model. The PISA test results not only show it to be one of the highest scoring countries in the past decade (in reading, mathematics and science), but that this academic excellence also permeates all schools and pupils in the system. According to this evidence, Finnish schools efficiently and effectively teach all pupils, regardless of their family background or socioeconomic status (OECD, 2011). This combines with other major advances in schools and higher education: over 99% of pupils successfully completed compulsory primary education; almost 90% completed secondary education; and of those, two thirds gain entry to universities or vocational training institutions (Darling-Hammond, 2012).

Various factors explain the success of the Finnish model. Initially, a series of post-war economic and social policies aimed to industrialize the country, improve primary and secondary education and expand higher education. Subsequently, national policies reflected the country's move towards a high-technology economy, as well as the reform of basic public education with the creation of the comprehensive school (*peruskuola*) to teach all pupils regardless of socioeconomic status, interests or area of residence. This was against the backdrop of the Finnish welfare state and national efforts to achieve greater social and economic equity (Sahlberg, 2010; OECD, 2011).

However, the most decisive factor in the success of the country's education system is the excellent work of teachers (Sahlberg, 2010; OECD, 2011). Finland has developed a high-quality teacher training model that has raised entry standards for teaching courses. Alongside this, the country has ensured that teaching is based on professional dignity and social respect, while striking a balance between classroom work and collaborative work with other professionals in the school (Sahlberg, 2010). The considerable social and professional status of Finland's teachers has significantly pushed up demand for teaching careers in the past 20 years, thus making entry into the profession intensely competitive (with only the brightest students achieving this "professional dream") (Sahlberg, 2010).

Other aspects boosting teacher performance are:

- Robust teacher training. Teacher training in Finland is mainly academic, being based on and supported by scientific knowledge

and focused on cognitive skills and thought processes. Scientific knowledge is then linked with teaching know-how and practice. One of the minimum requirements for entering teaching is a Masters in Education.

- More time for teacher reflection. Teachers in Finland spend less time in the classroom (680 hours a year in primary school, 550 hours a year in secondary school) than the average for OECD countries (780 hours a year and 660 hours a year, respectively) (OECD, 2012). The extra time is used to strengthen lesson planning and the assessment of pupil learning, which are highly decentralized activities that are almost entirely the responsibility of schools and teachers.

- Competitive salaries and a teaching career based on experience. The salaries in the teaching scales are competitive, and similar to those received by professionals in other disciplines with similar experience and training (and in line with OECD averages of US $37,000 PPP[47] a year for primary teachers and US $43,000 PPP for secondary teachers (OECD, 2012)). The aim is not to discourage talented young people from entering teaching. In addition, teachers' salaries increase significantly with experience (rather than being based on performance).

- Teachers are seen as leaders. Education professionals (head teachers and teachers) are exclusively responsible for administrative activities and school management (with pedagogical leadership being one of the most important aspects). Teachers trust in their own vision of leadership, while head teachers have confidence in the work of teachers.

According to Sahlberg (2011), and based on the assessment framework of Stein and Tomassi (2006), the teacher development policy in Finland appears to fulfil at least the following characteristics:

i. **Stability over time**. The post-war policy was to transform the model of Finnish society into an industrialized developed economy based on world-class technological innovation, with an emphasis on equity and well-being of all inhabitants and an education system to match these challenges. Social agreement and political leadership have been key in maintaining the basic principles and overall

47 *Purchasing power parity (PPP) refers to the value of the dollar in different situations.*

mission of the public education system since the 1970s. Politicians on all sides agree that a highly and broadly educated country will achieve comprehensive development.

ii. **Adaptability.** Although stability is valued as a major quality of educational reform in general (and teachers in particular), the development of Finland's education system has been based on constant adjustments owing to the changing needs of citizens and society.

iii. **Policy coherence.** The model of teaching excellence achieved in Finland went hand in hand with the main objective of education reform that was introduced in the 1990s. The change to a knowledge-based society that was economically and socially developed needed an education system to equip skilled and creative young people with the abilities needed to work in a highly changeable technological economy.

iv. **Quality of implementation and execution.** The high level of performance and prestige among teachers in Finland is due to a series of well-implemented teacher training policies including a raising of entry standards, more demanding teacher training and increased requirements for working in schools (which were agreed upon by all eight education faculties and monitored by the Ministry of Education).

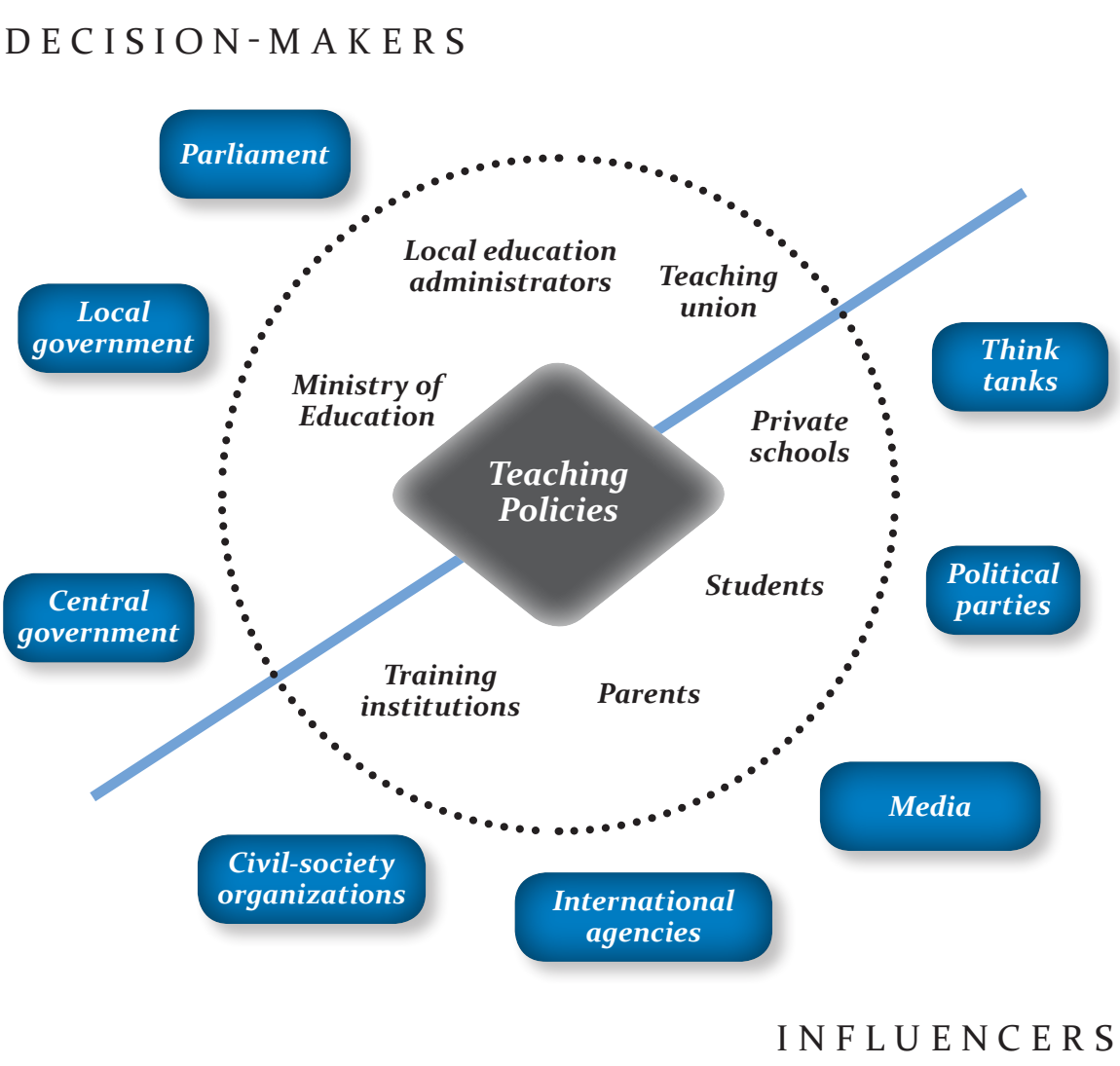
v. **Seeking the well-being of all society.** Finland's teacher development policy points to the excellence of an education system designed not only to improve the learning and academic performance of all pupils, but also to accompany the social development project undertaken by the country since the 1950s.

vi. **Efficient use of resources.** Advances achieved by the Finnish education system went hand in hand with the commitment to inject considerable resources at all levels (including special and higher education), almost all of which were from public funds (Sahlberg, 2010). The country's public investment in education as a proportion of GDP (6.3%) has been one of the highest out of OECD countries for the past 15 years (OECD, 2012).

2 Map of main actors and their relations

Teacher policies arise and are developed on the basis of actions by various actors. Although the most visible participants are actors from the education sector, there are stakeholders from other parts of society that are crucial in making final decisions. It is useful to list these main actors and classify (broadly speaking) their role as decision-makers or influencers of teacher policies, in the sense that everyone is in some way involved in their formulation (Scartascini et al., 2010; Scartascini, 2010).

FIGURE 2. MAP OF MAIN ACTORS



As shown in the figure above, there is an initial distinction between education actors (within the circle) and those outside that play an active and crucial role in teacher policies (outside the circle).

The main relationship is between education sector actors: the ministry of education (which holds some of the executive branch's power to lead education policy),[48] and teachers' unions (which are the organized representative for teachers' demands and interests) (Palamidessi, 2003). These are the main actors responsible for producing these policies and they have the power of veto over them (Navarro, 2001).

The two groups of actors may be very different, depending on the national situation and how that simplifies or complicates the representation of the executive branch or teachers. There are huge differences in the scale of the region's education systems,[49] but also in the forms of State political organization. In some countries, the ministry of education does not have exclusive authority over the government's education actions, as other agencies (such as Uruguay's Central Governing Council for Education – CODICEN) also have indirect influence. In federal countries with decentralized executive power, local or regional governments hold considerable (if not total) sway when it comes to critical teacher policy issues such as setting of wages or working conditions (Palamidessi, 2003). Some school systems have set up new public agencies (like the creation of the National Education Council or Education Quality Agency in Chile) to carry out specialized roles with some independence from the ministry. This is part of a general move away from the State and towards functional specialization (Schick, 2001). In many countries, union representation involves more than one national body, and there may be various unions or forms of representation, either due to different identities and ideological/political perspectives (many unions seeking national representation), the representation of different teaching groups (primary/secondary teachers) or the representation of specific geographical areas or territories (unions in autonomous provinces/regions or not part of national organizations) (Palamidessi, 2003). Union diversity ranges from fragmented situations to a single national organization, as well as all stages of linkage and coordination inbetween (Palamidessi & Legarralde, 2011). In brief, the forms of representation in each country can result in a very simple two-way interaction between the relevant government authorities and teaching unions, but can also take the form of a more complex relationship involving various actors on both sides.

Within education ministries, there are different bodies tasked with handling various aspects of teacher policy (to clearly differentiate technical from policy functions). In this sense, teacher training seems to be the sphere treated the most separately, and several of the region's countries have created specialized public institutions for this purpose (such as the National Institute for Teacher Training in Argentina). These may be set up directly or in partnership with other public or private agencies. The spheres of wages or working conditions, in contrast, do not usually have their own specialized technical bodies within education institutions,[50] but rather they are incorporated within policy definitions and are directly managed by the relevant public authorities. There are

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48 *Although this view of the sectors that implement the executive branch's action remains the prevailing vision, its critics say that this belies the complexity of issues and leads to partial and piecemeal solutions to problems that are often intersectoral (such as poverty, drug addiction or school dropout rates) (Muller, 2011).*

49 *One example of this clear diversity is the different size of national unions: while the Mexican teachers' union, SNTE, has one and a half million members, the union in Trinidad and Tobago (TTUTA) has just over 10,000 members (UNESCO-OREALC, 2013).*

50 *This lack of technical support often means that such strategic information and definitions are provided by ministries of finance or economy (which makes education officials the unwilling representatives that have to inform teaching unions and public opinion on matters over which they have little control) (Weinstein, 2006).*

also specialized bodies for crosscutting tasks within ministries, which may be more or less relevant to teachers. One example is the monitoring of teaching quality, for which specialized measurement units have been set up (which often only consider pupils' learning outcomes while others include information on teachers' classroom work). What seems rare in the region's ministries is having strategic bodies to provide an overview of teacher policies, plan medium- and long-term actions in the light of all factors and be able to link all existing knowledge and information. As a result, units specialized in certain parts of teacher policy, ad hoc units created by circumstance or even general units (that deal with teacher matters among others) barely communicate with each other and do not act like complementary parts of the same structure and policy. This weakness is part of the *institutional deficit* affecting public institutions responsible for the sensitive issue of teachers.[51]

In the case of decentralized school systems, many teacher policy decisions are taken by education bodies within state, provincial or municipal governments. Dimensions such as ongoing training, the distribution of teachers throughout the area's schools and colleges or the setting of salary adjustments and working conditions are thus defined in a decentralized way. In these cases, the relevant or main dialogue partner for teaching unions becomes this local or regional institution, and their access to the national education ministry is therefore restricted. A natural consequence is that teacher policies in these decentralized systems lose their uniqueness and acquire significant differences and nuances in the various territorial divisions.[52]

A second level of relationships concerns education actors that are not usually direct participants in policy-making for teachers, but do have a major influence in this regard. This influence can be brought to bear before decisions are made, as their viewpoints affect how teaching issues and options are seen. Influence can also come into play following decisions, as these actors are crucial for the implementation of policies adopted. In the latter context, teacher training institutions (or education faculties and state training institutions) have a relevant role, as they play an active part in implementing (initial and ongoing) training for teachers (although they may have had little say in approving such training actions). Similarly, the voice of organized students and parents can influence decisions, as they have a relevant view of teachers and their abilities/needs. Schematically speaking, if parents and pupils ally with teaching unions to bring shared demands to the executive, back up their specific demands and trust the quality of teachers' work (or at least trust that teacher performance problems are mainly due to external shortcomings that should be resolved by governments), then this is very different from approaching the issue as opposing groups with parents and pupils pressuring the government, which then pressures teachers by imposing more demanding performance requirements and targets (on the basis that teachers have considerable responsibility for the quality of education imparted and that more should be expected of them).

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51 This lack of strategic vision in education (as shown in studies on education ministries in Argentina and Chile (Aguerrondo et al., 2009)), also applies to other critical public policy issues in the region. This limits the public sector's contribution to national development (Lahera, 2004).

52 These differences can result in significant inequities within the teaching sector, with the differing levels of economic and social development nationwide reflected among teachers. In Brazil, for instance, teachers negotiate and receive different wages and working conditions in the 5,500 plus municipalities (Palamidessi & Legarralde, 2011), which has been tackled through the Fund for Primary Education Development and for Enhancing the Value of the Teaching Profession (FUNDEB), which redistributes resources to compensate the states and municipalities with lower investment per pupil (UNESCO-OREALC, 2013).

Within the field of education, there are also private schools that are unevenly represented throughout the region (from being a tiny minority in many countries to monopolizing most teachers and pupils – with public funding – like in Chile). Policies must then define whether their standards and definitions cover private-sector teachers. This means having a dialogue with the owners of private schools, which may be natural persons or institutions (such as churches) that can form federations or other alliances.[53] In these cases, the universality of teacher policies must be defined.

Outside the education sector, there are actors that are extremely important for teacher policies (with again a useful distinction to be made between those involved in taking and influencing decisions). Those involved in decision-making include government and parliament, while those influencing decisions include political parties, the media, research centres, think tanks, civil society organizations (including churches and business owners) and international agencies.

In terms of government, the ministry of education does not run itself. There is a structured executive power under the general authority of the president that sets frameworks for policy that are then rolled out by each ministry. These policies are usually united by a common conceptual basis, based on a certain vision of society and the role of the State that is shared by the government coalition (Muller, 2011). The budgetary impact of teacher policies means that they do not only come under the remit of the education ministry, but that the ministry of finance also has considerable say in the measures adopted and the fiscal commitments taken on. Similarly, the potential implications of teacher policy decisions in terms of public order and mobilization (such as the national impact of teacher stoppages on the normal routine of households with children and adolescents not able to attend school) mean that ministries responsible for governance and political action also need to be involved in at least this aspect of decisions. In systems where provincial or municipal governments play an active role in education policy, the relevant political and financial bodies also work with the education sector as part of the decision-making process. In any event, it should be stressed that the executive branch (represented by the education ministry for internal school matters and by these other agencies in external school matters) is the main or key actor in policy-making that takes the leap from specific interests to the general interests.[54]

Parliament is the political space where teacher policies manifest themselves in the form of laws, budgets or constitutional change. These institutions often have education committees to bring together parliamentarians of all creeds with the most interest in or knowledge of the subject to engage in technical discussion and the political processing of initiatives. The education ministry and the government must come to parliament to move forward with teacher policies in their interest. Especially when a coalition lacks a majority, this often involves having to compromise and amend their initial proposals. In a democracy, the teaching unions also often come to parliament to have their position heard on decisions to be adopted (often with allies among parliamentarians or political

53 *In Chile, there are some rules on teachers that are binding for private schools (such as a set level of wages and the demand of certain requirements for classroom teachers). Such schools are exempt from other rules, such as wage recognition of seniority or the need for regular assessment (Mizala et al., 2002).*

54 *According to Hood's classic analysis (1983), the executive branch differs from all other actors as it combines "nodality" (being at the heart of matters), its own resources (laws) and funding (treasury) and the bureaucracy to take direct action.*

groups that identify with their stance). When the government and the teaching unions approach parliament together for the approval of a previously agreed joint initiative, this is unlikely to be opposed (Weinstein, 2006). When their positions diverge, however, parliament tends to operate as a forum for negotiation and the search for common ground between the parties.

The influence of political parties goes even further than their key involvement in the manifestation of many teacher policies through parliament in the form of agreements and new laws. Indeed, political parties can and often are involved in politically leading the two main actors. This applies to the government and education ministry, but also to the upper echelons of teaching unions (whose representatives in this region are rarely apolitical and often part of national political movements/parties or willing to form alliances with coalitions for or against the government).[55] The political nature of union leaders can be more decisive for positions adopted on teacher policy and the government, with situations ranging from co-optation and conflicts of interests whereby the teaching union is directly involved in managing public resources (which can lead to cronyism), to open and permanent conflict that is outside parliament and opposed to the prevailing political and economic system as a whole (when the union is headed by anti-system political movements/parties).

The remaining actors have an indirect impact on teacher policies, influencing the direction of decisions adopted but also the timing and order thereof. For instance, research centres and think tanks are increasingly guiding the definitions used by the education ministry and the teaching union by providing them with a technical and political basis for their relevance, need/priority, expected effects and cost implications. As stated, given the high financial impact of teacher policies, there needs to be a sound basis for the technical viability of measures and for the certainty of their impact on education quality. The media (and increasingly social networks, thanks to the Internet) is the public forum for discussing the legitimacy and importance of certain measures according to public opinion. All of the main actors and their political allies (especially in times of conflict) will be aiming to ensure that the government's or union's positions are visible and setting the agenda in this context. Equally important in the communications sphere is the position on teaching issues adopted by various civil-society organizations, including the church and business owners. Indeed, the "teacher issue" can be seen from different angles, ranging from teachers being guilty of the education situation (and a need for a transformation of their professionalism to make any improvement) to seeing teachers as victims of the prevailing system (who need support to achieve the dignity denied to them thus far) (Mezzadra & Composto, 2008). As these opinion-makers and their organizations are not directly involved in the dispute between the government and teachers, their viewpoints have more public credibility and can be crucial in winning the communications game. Lastly, international agencies also have a key role to play. The World Bank, the Inter-American Development Bank, OECD, OAS, OEI, UNESCO and international teaching union agencies (particularly Education International) provide some education and teacher policy guidelines that are adopted by the government or teaching union (and often presented as their own). This external influence rises when

55 *The region even has cases (such as Mexico) where the teaching union has officially become a political party to negotiate support for government coalitions (Palamidessi & Lagarralde, 2011).*

governments have significant loans or donations from such agencies (Schwartzman, 2011). In addition, some agencies (such as OECD) now conduct comparisons of education quality among various school systems (such as PISA) and classify countries accordingly before disseminating "lessons to be learned" from success stories (which gives them huge influence over the domestic education agenda) (Van Zanten, 2011).

Below is the inspiring example of Australia, where the government demonstrated huge leadership ability in introducing teacher policies, and doing so in dialogue with other major actors to ensure they have technical, social and political legitimacy.

BOX 2:
IMPLEMENTATION OF TEACHER POLICIES – THE AUSTRALIAN INSTITUTE FOR TEACHING AND SCHOOL LEADERSHIP (AITSL)

At the beginning of the new millennium, Australia embarked on a series of reforms aimed at correcting inequity in its education system (which was reflected in a wide gap in pupil results based on their socioeconomic status). The Ministerial Council on Education, Employment, Training and Youth Affairs announced the National Goals for Schooling in the 21st Century as a way of tackling socioeconomic disadvantage, increasing literacy and schooling and improving the quality of teaching and leadership (Economist Intelligence Unit, 2013). A collaborative work agenda was set up with various system actors in order to: strengthen schools and educational communities to encourage teachers, students and families to work with businesses and the community in general; develop the curriculum and associated assessment and accreditation system to promote education quality; increase citizens' confidence in public education through explicit standards to guide the improvement of pupil performance and to measure and assess the effectiveness, efficiency and equality of the school system; and improve the quality and status of the teaching profession (MCEETYA, 2003).

With the latter objective in mind, a working group was set up. It was chaired by the Ministerial Council on Education and made up of various education professional and academics tasked with formulating proposals on initial training. This working group gave rise to the Australian Institute for Teaching and School Leadership (AITSL), which became operational in 2005. Its main objectives are to:

- Develop and maintain rigorous professional standards for teachers and principals in Australia;
- Implement a national teacher accreditation system based on those standards;
- Foster high-quality professional development for teachers and principals based on those professional standards;
- Work collaboratively with government and non-government school systems, key stakeholders including professional associations and education unions, teacher educators, business and school communities, and the Australian Curriculum Assessment and Reporting Authority (ACARA) and Education Services Australia (ESA) (AITSL, 2012).

AITSL is a public institution that relates to the Australian Government through the Ministry of Education. It has a board of directors responsible for developing AITSL policies and overseeing its operations and performance. The board is made up of representatives of various actors from the education system: from the Australian Government, State and territory regulatory authorities, teacher unions, principals' associations, the Australian Education, Early Childhood Development and Youth Affairs Senior Officials Committee and individuals from the Catholic and independent school sectors.

In order to achieve its objectives, AITSL has a series of initiatives, including:

1. In its work with teachers, support for the implementation in the system and schools nationwide of **Professional Standards for** Teachers, which are formulated and validated by the Ministerial Council on Education, with a view to defining teachers' work and make explicit the elements that define effective high-quality teaching in four categories (graduate, proficient, highly accomplished and lead teachers). It provides a framework that clearly describes the knowledge, practice and professional commitment needed throughout the teaching career. Along the same lines, it also implements standards and procedures for the **Accreditation of initial training programmes**, based on three interconnected elements: Standards for Graduate Teachers (stating the

knowledge, skills and attributes expected of graduates from accredited programmes); Standards for Programmes (describing the key aspects of high-quality teacher training programmes); and the Accreditation Process (which is the national process for accrediting training programmes). This effort involved a series of activities, including:

(i) Piloting of standards coordinated by external institutions nationwide to find out the requirements for effective implementation.

(ii) Launch of a website, www.teacherstandards.aitsl.edu.au, which publishes the various standards, as well as disseminating resources and support materials for teachers to find out about standards and how to use them (with examples, strategies and guidelines).

(iii) In each province, implementation of the different sets of standards was delegated to teacher development institutions similar to AITSL, such as the Victorian Institute of Teaching in Victoria, the Institute of Professional Learning in Western Australia and the Queensland College of Teachers. In several provinces, work had already been under way in teacher training (and formulation of standards, which have since been replaced by the national initiative).

2. In its work with principals, its mission relates to the specialization and accreditation of school leaders. It therefore implements the National Professional Standards for Principals, which were formulated and validated in 2011. The standards define what principals are expected to know, understand and achieve to attain excellence at work (AITSL, 2011). The implementation model considers some of the following elements:

(i) Piloting activities coordinated by national independent and specialized institutions to measure the relevance, use and value added of standards for principals with various actors in different contexts, as well as to develop the sense of belonging and national consensus about the standards.

(ii) 360 degree reflection tools for school principals to reflect critically on their performance and receive feedback from peers, students, staff, community members and school boards (based on the attributes considered in the standards).

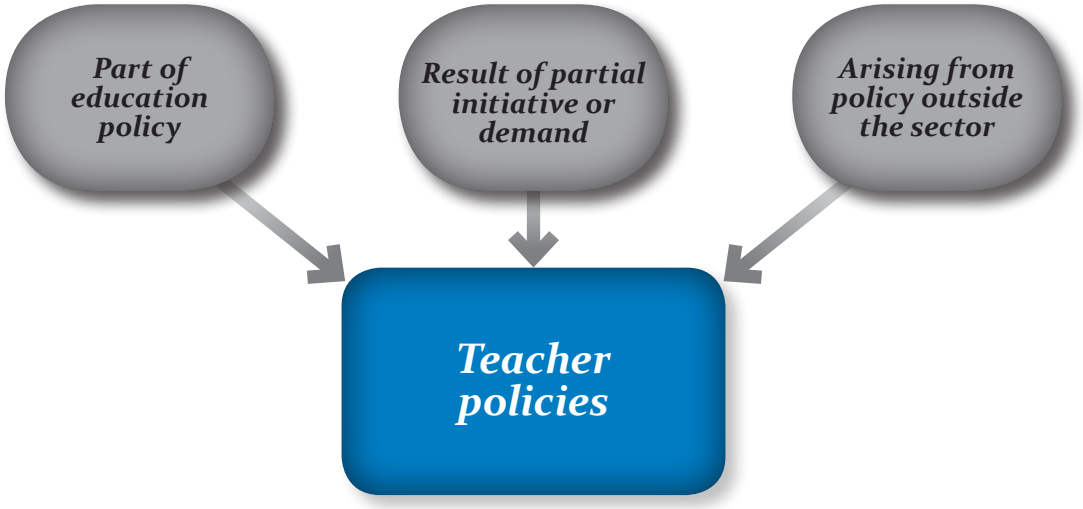
(iii) Roadshow led by a team of experts to include meetings with schools and leaders to discuss standards and define action and implementation plans for each school.

According to international reviews, these national professional standards for teachers and principals will promote a positive movement within the teaching profession to align teaching practice with pupils' learning objectives. In addition, the standards will serve as a powerful quality assurance mechanism to ensure that Australian teachers and principals have the necessary skills to be effective educators. Similarly, the creation of AITSL is also an expression of the wish to introduce the idea of the quality of teaching and leadership at the national level (Santiago et al., 2011).

3 Dynamics of teacher policy formulation

Although the map of teacher policies gives an idea of those usually involved in policy-making, it does not show how the processes occur from a social and political point of view. One useful distinction seems to be their origins, in terms of the process that gives rise to teacher policies and that shapes their characteristics (as well as their sociopolitical dynamics of construction and their potential to include actors beyond the teaching profession). Distinctions can thus be made in terms of: teacher policies contained within and needed by education policies or major education reforms that are implemented; teacher policies that arise from a partial initiative that tackles a specific dimension of teachers and their work; and teacher policies that are the result of more general government actions that are not specifically aimed at achieving an educational impact (as with general State reform). The first category of teacher policies are part of major educational reform and/or policy, while the second and third categories are more independent from the overarching policy and tend to focus on one of the six dimensions of teacher policies under consideration.

FIGURE 3. DIVERSE ORIGINS OF TEACHER POLICIES



Education reform (seen as an expression of education policy) has certain objectives and targets to achieve that are formulated as serving people's well-being and the general development of the country. Success is far from guaranteed, as many obstacles must be faced. There is some evidence (Pedro & Puig, 1998) that the probability of (political) success increases when certain conditions are met, namely if:

- Education reform is presented as part of wider social reform;
- It is perceived as necessary by schools and other school actors;
- There is enough time for change processes to be implemented gradually;
- There is broad consensus among actors involved in its implementation;
- There are strategies to overcome resistance to change on the part of sectors expected to oppose the policy; and
- It includes a clear mechanism for overseeing, monitoring and assessing results.

There is probably no such thing as educational reform that does not affect teachers for better or worse. As they are the ones who carry out the daily work of education in thousands of classrooms and schools, any substantial change to the school system will affect their performance in and/or outside the classroom.[56] Teachers are usually seen as agents of change who must personify the new policies. It is therefore critical whether teachers (represented by their professional organizations) support or oppose these education policies. However, Palamidessi and Lagarralde (2011) have shown that the

56 *For Richard Elmore (2010), the depth of change in education policies lies in their capacity to have an impact on the pedagogical core of teachers and pupils (with subject content shared during the interaction between them). Without effective teachers, motivated pupils and relevant content, there can be no good education. The ultimate achievement of a reform should be measured precisely by its capacity to impact this basic or core level of teaching and learning.*

region has a wide range of situations in terms of teaching unions supporting or rejecting education reforms, and that relations are not always in one or the other direction (so that clashes alternate with moments of dialogue and vice versa). The authors also describe how failure to seek agreement on policy-making cannot always be attributed to teaching unions, as there are also governments that see the unions as political enemies and seek to weaken and exclude them without attempting to build opportunities for cooperation.[57]

However, education reform covers a range of different initiatives. The region's education reforms have therefore been classified into two main categories: those aimed at broadening access and those intended to improve quality (with some reforms attempting to achieve both objectives simultaneously in varying proportions) (Navarro, 2001). Based on the cost-benefit analysis developed by Corrales (2001), the two types of reform face very different political difficulties. Access reform initiatives face little organized opposition, as well-defined groups would enjoy concrete benefits as a result of the change (such as increased access to schooling for pupils and families), while associated costs (such as higher taxes to fund the increased provision) would be spread out among individual taxpayers. In the case of teachers, access reforms tend to increase the demand for their services (as more teachers need to be hired or the same teachers need to work more without necessarily changing the professional requirements expected of them).[58] At times, the main request following measures to increase access is simply to have enough teachers to meet the increased demand for education. This means there is some overlap in the interests of the main actors involved in policy-making (such as the education ministry and teaching unions).

TABLE. COST/BENEFIT ANALYSIS OF TWO TYPES OF EDUCATION REFORM

	Concentrated costs	**Concentrated benefits**
Dispersed costs		Access reform
Dispersed benefits	Quality reform	

Source: Corrales (2001).

In contrast, reforms targeting quality face the opposite challenges: benefits are not immediately tangible for supposed beneficiaries (as possible changes to the quality of pupil learning can only be seen in the medium term), while the costs are considerable. Furthermore, costs are concentrated on organized groups that must show changes that are difficult to achieve, while also suffering the negative consequences if they fail to achieve set targets. In terms of teachers, they tend to have their classroom performance monitored. They are given new requirements, along with sanctions associated with a lack of compliance, or assessments of their professional skills and incentive systems

57 *The extremes meet in this case, as authoritarian governments do not see the importance of including teachers in policy-making, while ultra-ideological unions fail to see the need to collaborate in changes to a system in which they do not believe.*

58 *This is why many of these reforms are seen more as social transformations (enabling new groups to enter or remain in education) than as educational changes per se. Using Elmore's terms, these changes do not affect the educational core.*

related to academic achievements. All of these measures raise the bar of demands, and the group is unlikely to meet all the new expectations. There is a conflict of interests here between the education ministry and the teaching union that is not easy to resolve.[59] In terms of the various dimensions of teacher policy, quality improvement reforms tend to affect all six dimensions, with a special emphasis on the monitoring of learning quality and professional development. Both of these two elements can be used to ascertain teaching quality, as well as to expand the professional skills of teachers subsequently.

In any event, the success of education policies (that implicitly or explicitly include teacher policies) largely depends on their ability to mobilize political support and form broad coalitions to provide backing that goes beyond the current administration to form part of cooperation agreements that extend over time (Scartascini et al., 2010). Truly political agreements, in which various coalitions of political parties reach broad agreement on education issues in the form of national covenants are a desirable yet elusive target.[60]

It has been identified as politically expedient (Grindle, 2001; Corrales, 2001) to generate various institutional mechanisms and forums for forging national pro-education agreements. Different groups and viewpoints should be represented at these forums, with a view to reaching shared long-term visions. In several countries, the executive branch has therefore set up committees to analyse the education situation and suggest effective policies for change (that can then be processed by the government and parliament). The committees have varied in the scope of the task entrusted to them by the executive: from the resolution of a single but thorny problem (like the professional profiles that must be catered to by vocational education in the light of a changing labour market) to the formulation of a more far-reaching programme of reforms. Although these committees or commissions take different forms based on national circumstances, there are certain characteristics associated with purely technical bodies (that task renowned experts with analysing the education sector and selecting the best technical solutions among the many options available) or sociopolitical bodies (that use technical opinion as well as gathering and combining the viewpoints of major social stakeholders from teacher organizations to business owners). These ad hoc committees can forge pre-legislative consensus in the sector, which the government can then take up to facilitate the adoption of laws that follow the path of consensus. Committees can also raise public awareness of the challenges facing education, thereby mobilizing public opinion in favour of more ambitious targets or an increase in investment in education.[61] These forums for discussion can move beyond a temporary status set up to respond to a specific request from the executive, and become institutionalized in the form of a National Council for Education (or similar body) that becomes part of the education

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59 *In some education systems, the teaching unions have set their own professional performance requirements, resulting in a set of standards that have ultimately been adopted by the profession (Cox et al., no date). This action is also a show of force by the teaching profession in society, as self-regulation that is not imposed by the outside shows that teachers themselves are the best placed to guide professional assessment (Schwartzman, 2011).*

60 *There are many ways in which these actors can overcome inertia and see the need to agree on a policy to change a given sector. Muller (2011), citing Fabre, states that these ways include the emergence of a social actor or demand to pressurize the political class, a gradual conviction of the need to change and take long-term measures, or the occurrence of a particularly high-profile public event that prompts a mobilization of political responses.*

61 *This is clearly an echo of the "A nation at risk" report produced 30 years ago by the National Commission on Excellence in Education formed by Minister Terel Bele, which had a huge impact on public opinion. This resulted in pressure to push through major education reform and paved the way for increasing the resources invested in education.*

sector. The body therefore fulfils a State role and is systematically involved in passing opinion, suggesting or deciding on major issues (such as the national curriculum).

However, not all teacher policies arise as an integral part of educational reform. They may also emerge in a more fragmented way to form measures that are implemented within one or more areas of teacher policy in response to demands from the teaching movement or targeted initiatives from the executive.

Working conditions and teaching career (including wages) are the most visible dimension. This is the main source of demands for teaching unions, which prioritize this area above positions on changes within the education system (Palamidessi, 2003). It is also the area that often inspires the most committed mobilizations within the profession. This mobilization may be due to different dynamics, such as a reaction by teachers to new government policies that affect their working conditions and acquired rights (such as potential changes to labour statutes), or a proactive mobilization with teachers seeking new victories and an improvement to their socioeconomic situation. The problem is that this type of sector-based conflict driven by "teachers as workers" is unlikely to lead to more general teacher policies,[62] and tends to be limited to increasing the range of existing benefits without passing judgement on general education policy. With this in mind, the government must decide whether it will make meeting these demands dependent on other teaching/education policy objectives (such as making wage rises conditional upon teachers undergoing professional performance assessment or taking part in demanding professional training processes). In any event, this case is unlikely to see coordination between teachers' demands and other social and political actors.[63] Unlike the previous case, most reforms can be rejected or supported from wider sectors, such as parents and pupils, civil-society organizations, the media or public opinion.

Some transformations to areas of teacher policy result from educational repercussions of new definitions within other branches of the administration concerned with general transformation (not specific to the school system). This applies to so-called State modernization processes that usually involve radical changes in the way the public system (including education) is managed and the relations maintained with public officials working therein. Examples include the municipalization of social policy (with education management moving from national ministry to a range of local governments and teachers becoming municipal employees rather than civil servants) or the introduction of accountability policies in the public sector, leading to a system of standards and resulting information systems for monitoring and consequences (McMeekin, 2006; Osborne & Plastrik, 2003). Changes that originate outside the school sector can also apply to initial teacher training, whereby processes of change in universities trigger transformations in admission processes for teaching students or course accreditation.[64] Where teacher policies emerge as a result of other reforms, unlike the previous case, there is the

62 *There is a possibility (UNESCO-OREALC, 2013) that teachers see themselves as workers, and so tend to express solidarity with other workers and swell the ranks of trade unions, or that they perceive themselves as professionals that must demonstrate their specific professional know-how and skills and bring a technical opinion to the wider debate on education.*

63 *This is the risk for the teacher movement of being isolated in its struggles without support from other actors for specific demands (pay rises, improved working conditions and so on) that may seem self-referential and bearing little relation to the need to improve the quality of education.*

64 *This certainly does not apply to countries where teacher training is mainly the responsibility of non-university institutes (as in Mexico, Peru or Argentina) (UNESCO-OREALC, 2013).*

possibility of partnerships between teachers and other sectors also impacted by major government decisions (such as civil servants or university teachers).

Above and beyond the origin of teacher policies, it is vital to note the importance of their legitimacy in the eyes of teachers and society if they are to be effectively implemented in schools and classrooms (and stand the *test of time*). The way in which sectoral definitions are formulated does affect their ultimate legitimacy. It is therefore important for these policies not to oppose traditional teaching demands, but rather be presented as a higher stage of teaching professionalism that includes those demands and carries them forward into the future. It is also vital for such policies to be in step with new public demands of education and teachers, as a demonstration of how valuing teachers is a strategic matter for national development (rather than just a special interest for teachers). In this sense, the growing presence of systems to measure pupil learning (regularly showing the public the situation nationwide and in each school) is a new factor that should be carefully used to promote real school improvement (rather than the stigmatization of schools or ill-informed criticism of teachers within public opinion).[65]

The inspiring case study of reform in the province of Ontario, Canada, has been chosen to illustrate this situation. The improvement of the school system and priority indicators was closely linked to the development of teacher policies, while permanent forums for participation and consensus building were also introduced for the key actors in the school system.

BOX 3:
VIRTUOUS DYNAMICS OF CONSENSUS BUILDING FOR EDUCATION – EDUCATION REFORM IN ONTARIO, CANADA

The reform in the province of Ontario, Canada, was implemented nearly a decade ago. Its education system has almost 5,000 public schools attended by just over 2 million students taught by close to 120,000 teachers.

The reform was based on two major initiatives from the Ministry of Education:

(i) The Literacy and Numeracy Initiative aimed to increase the reading and mathematics results in primary schools, through capacity-building for educational improvement for teachers and head teachers through professional learning, strong leadership, increased resources and a real commitment from parents and the rest of the community.

65 *The damaging effects of counterproductive use of pupil learning results have been documented in specialist literature: narrowing of the curriculum, pupil selection, teaching to the test, teacher stress and burnout and so on (Hargreaves & Fullan, 2012; Darling-Hammond, 2012; MacBeath, 2011). There is therefore a need to emphasize the value of internal accountability, which promotes the school's use of this information (over and above external accountability – which is also essential) (Elmore, 2009).*

This strategy has pushed up the province's average pass rates in reading, writing and mathematics from 55% in 2003 to 70% in 2010

(ii) The Student Success Initiative aimed to increase graduation rates in secondary education to 85%. This initiative, which is mainly based on the early identification of pupils most likely to dropout, and the development of various incentives that aim to keep pupils in school. It has raised graduation rates from 68% to 79% in 2010. (Levin et al., 2008; OECD, 2011).

A key role in the success of this education reform has been played by interaction and collaboration of all relevant actors, from the Ontario Ministry of Education to head teachers, schools and various provincial and local teacher and head teacher organizations (plus the support of experts and academics) – with everyone committed to the strategy for change.

Strong political leadership throughout the education system has also been vital in the success of the reform. The involvement of Prime Minister Dalton McGuinty and the education ministers has resulted in progress in the work agenda, with schools focusing on a specific set of priorities for a long period of time (Levin, 2008). Although the strategy was led and coordinated by the education ministry, suggestions and inputs were welcome from system actors. Specific policies within the reform were devised to include a recognition and presentation of existing good practices in the province's schools (Levin, 2008).

These efforts to promote participation led to the creation of various committee and round tables. The main one in the design phase was the Ontario Education Partnership Table, which was coordinated by the Ministry, in which various system actors could meet with the authorities two to four times a year to discuss the main aspects and characteristics of the reform. This was used as a basis for various round tables in which smaller groups made progress on specific issues, such as the Working Table on Teacher Development and the Teacher Performance Appraisal Provincial Coordinating Committee that worked on professional development and teacher assessment; or the Institute for Education Leadership set up to support capacity building and learning among head teachers (Ontario Ministry of Education, 2008).

In addition, local and regional bodies were created for the purpose of guiding capacity building for each of the main strategies. This was coordinated by a technical secretariat made up of 100 professionals (mainly teachers, head teachers and subject experts) responsible for implementing the objectives of basic education. The secretariat is autonomous and is partly independent from the Ministry of Education – thereby overcoming bureaucratic barriers and enabling work to be carried out at the level of each district and school.

A different model was used to increase graduation rates from secondary education. Rather than prioritizing support from a central level, resources were provided to schools so that they could hire a team of expert professionals coordinated by a Student Success Leader, on the basis of the needs of each school district. The Ministry's Secondary Schools Unit was responsible for leading and coordinating the process at the provincial level (Levin, 2008). The Student Success Commission was set up with representatives of federations of teachers, head teachers and superintendents to support implementation of this aspect of the strategy (Levin et al., 2008).

One decisive factor in the success of reform in Ontario was the healthy bargaining dynamic between the authorities and teaching unions, which aimed to engage and involve teachers in the change strategy, on the assumption that improving the province's 5,000 plus schools required ongoing and sustainable best practice efforts by thousands of teachers. This was achieved thanks to at least the following four aspects:

(i) Basing reform on capacity building, with less emphasis on the public delivery of results and more focus on external support to underperforming schools (rather than punishing them or closing them down, as was the case in more punitive versions of school change in the United States).

(ii) Political skill and consistent leadership from Education Minister, Gerard Kennedy, who held quarterly meetings with the main unions of teachers, head teachers and superintendents to establish a shared vision of reform among teachers, schools and unions.

(iii) Signing of a four-year collective bargaining agreement with the main teaching unions involving negotiations of various issues on the aims of the reforms and teacher interests (such as smaller class sizes and more time for lesson planning – which created 5,000 new jobs). This agreement facilitated the implementation of the education agenda and created a peaceful working environment that made it possible to focus on educational improvement (OECD, 2011).

(iv) Public gestures to secure the cooperation of unions and their commitment to future changes. These actions involved reversing some previous government initiatives that were unpopular with the unions (such as returning authority to the elected representatives of local education governments in districts such as Toronto, Hamilton and Ottawa, or removing the tax exemption for private school fees). In addition, the education budget was also increased by about 1.6 billion dollars.

4 Looking to the future

This document has aimed to provide concepts, inspiring case studies and criteria that can be used to reflect on an issue that is relevant yet has been scarcely studied in the region: politics that can enable (or hamper) the development of teacher policies. In conclusion, below is a review of the four main areas that can enable policies to be properly implemented.

The first area relates to the need to make teacher policy decisions in reference to an education policy that must contain and lend meaning to the former. Teacher policy cannot be validated or understood in isolation, based on teachers' achievement of their demands (as important or fair as those may be). Instead, teacher policy can only be understood on the basis of its impact on the general objectives of education policy. It is not appropriate for education ministries or unions to raise the teaching issue as an isolated topic, particularly when education holds the key to the development of societies. The measures included in teacher policies should be analysed in terms of their direct and indirect impact on pupil learning and education. Teachers are the main player in achieving the educational targets set by the region's countries, especially in terms of a move away from pupil access and retention based objectives towards learning-based targets. Achieving quality teaching for all (which is synonymous with quality education for all) should be the strategic meaning that mobilizes the various social and political actors to build long-term agreements.

It is vital to stress that there is no set recipe: teacher policies can only be successful if the models adopted are relevant and appropriate to the history and reality of the school systems in which they are implemented. This was borne out by the recent SABER study (World Bank, 2012), which identified four different models that achieved excellent education outcomes using different definitions of how teachers should perform and the support that they should be provided. These models ranged from extreme professional autonomy (Finland) to prescriptive performance management (Singapore), with others including shared teacher responsibility (Shanghai) and the development of a progressive professional career (Ontario). Behind this diversity, there lies a shared capacity to meet the main requirements that school systems demand of teachers in terms of professionals who are: well trained in education and their subject matter; motivated and having high expectations of pupils; constantly developing themselves professionally and able to work as a team; and working in the most challenging socioeducational environments.

Second, from the teacher perspective any teacher policy must clearly define its starting point, so that the various specific measures and initiatives can go in the same direction and give the profession a benchmark. The "teacher we want and need" must not be an ethereal and ambiguous topic for the school system (especially if the aim is capacity building among teachers). These attempts to be more explicit have increasingly resulted in teaching performance standards, which usually describe in detail the abilities, skills and practices that teachers should develop (as well as the acceptable level – or cutoff point – for every teacher (Cox et al., no date). These standards can and should be shared with various school system actors, to ensure coherence and alignment among the various actions relevant to teacher policies (such as initial training of future teachers in training institutions, individual performance assessment or improvements to the teaching career). Teachers have a key critical role to play in this (re)definition of their profession by driving through their own challenging proposals and vision of their work and professional identity while preventing it from being designed from the outside without their participation.[66]

Third, the successful formulation of teacher policies is closely linked to the political capacities that can be applied by the various actors (and the government in particular). The obstacles in the way of such programmes of actions and measures are considerable and difficult to overcome: they have a high and recurring financial cost that shows no tangible results in the short term; their success depends on complex institutional capacities involving various actors; and there may be a clash of cultures with teachers or other significant actors within the school system. It is therefore vital to forge broad consensus to support teacher policies, which can be reflected in majority coalitions for education change in various institutional forms (national covenants or agreements, specialist commissions and so on). These agreements and their somewhat formally structured support coalitions must involve the main political groups, so that changes in government do not cast doubt over or put an end to those initiatives. This will mean parliamentary support for adopting laws and massive budgets to implement the agenda

66 *As with other well-respected professions (such as medicine or the law), the most highly developed and prestigious teaching unions have been able to define their own profession within society (Schwartzman, 2011). In addition, the most respected professions in terms of specific knowledge usually have "one of their own" within the relevant ministry (such as doctors running health ministries or lawyers heading up justice ministries), while professions considered less complex or specific are governed by professionals from other disciplines (which is common in the education sector).*

over time. Coalitions should not stop there, and they should involve the main educational and social actors (including teachers and their unions) to make the support truly national and to promote the commitment that is part and parcel of participation. It is essential for teacher policies to form part of a wider agreement on general education policies and reforms, as this affords them more plausibility and scope than measures arising from a partial interaction between government and unions (or those resulting from general policies with repercussions in education).

Advocating these wide and participatory agreements for teaching is not to naively ignore the political difficulties involved. It is well known that regional politics has deep tensions due to pressing economic and social problems, as well as antiquated top-down public policy-making with a lack of long-lasting agreements at its heart (Scartascini et al., 2010). It is also common knowledge that the two main actors who should support agreements do not always have the willingness to demonstrate this. There are authoritarian governments who mistrust and do not believe in teachers' needs for social participation, while there are also union leaders who maintain an anti-system stance that leaves no room for political negotiation or partnership with the government. There is therefore a need for major political efforts based on inspiring national leadership to build the broad and inclusive coalitions that can achieve consensual teacher policies.

The task is not limited to the formulation and legal or administrative approval of teacher policies, as these must also be properly implemented and institutionalized. This crucial phase is not easy to master, and is often forgotten. Michael Fullan (2007) noted that governments and parliaments often believe that policies are fully implemented when the laws or the necessary budget have been passed, thereby focusing on the introductory phase over the necessary and complex implementation stage. Implementation requires institutional capacities at various levels of the school system (local, intermediate and national) that are often in short supply or completely lacking (or need to be developed as part of the new policies themselves). The time frame needed for appropriate development and the need to generate a virtuous sequence (ordering initiatives so that the initial ones materially or symbolically support subsequent ones) should be given particular attention.[67] There is also a need for monitoring systems to make suitable changes to the various initiatives, so that experience is learned from and the policy can gradually move towards better solutions. In this dimension of implementation, an important part of the problem is the persistent weakness of the region's education ministries, poor technical teams with limited powers and high turnover rates due to changes of government (or ministers) with no units tackling the "teacher issue" from an integrated and strategic perspective. In order to be viable and achieve sustainable results, the politics of teacher policies must be based on institutions and leadership that can combine political strengths with technical capacity.

67 *In Chile, for instance, there is a 10-year policy to gradually incorporate complementary pay systems: there was an initial overall pay increase for all teachers (from 1990 onwards); followed by the introduction of collective incentives for all teachers in schools achieving excellent results (1995 onwards); and lastly the implementation of individual incentive systems based on excellent teaching skills (2001 onwards). It would have been difficult to achieve consensus about the final result without this gradual approach (Weinstein, 2006).*

ANNEX

Table on results of negotiation between the College of Teachers and Ministry of Education in Chile (2000)

Sphere	*Measure agreed*
Improvement of the quality of primary and secondary education	• Additional non-teaching time • Internships in Chile • Bonus for teaching excellence • National teacher assessment system • Treatment for professional illnesses of teachers • Special retirement and pension plan
Improvement of equity in primary and secondary education	• Responsibility bonus for teachers in rural schools • Expansion of bonus for difficult performance conditions • Reduction in class sizes in disadvantaged schools
Expanded participation in primary and secondary education	• Creation of Regional Education Councils • Incorporation of the College of Teachers into the Higher Education Council • Assessment of full school day

Source: Weinstein (2006).

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Economic aspects of public policy-making for the teaching sector

Francisco Esquivel[68]

Introduction

The economic analysis of education policies has become increasingly important in the past 20 years. One significant discussion has been about development strategies in academic bodies and in various public policy-making bodies. Strategic reflection has identified that the individual should be at the heart of development strategy, as the ethical imperative governing each nation's wealth distribution and expansion processes. In this sense, improving society's material conditions should have a clear benefit for all members, such that humanity can progress to higher stages where people are free to make their own destiny without any form of disadvantage. However, it has also been noted that a society of fully formed individuals provides a production base for boosting growth, as the human factor is an essential ingredient in improving production processes (especially at this time when production dynamics require considerable thought and creativity).

In summary, two decades of intense strategic reflection have revealed that economic and social improvement must clearly be guided by human development. In this context, education is fundamental. Not only is it important for people to acquire knowledge at a basic level, but there should also be a move towards technical and professional training. The aim is therefore to generate quality education that lays a solid foundation in the initial stages of personhood, that then culminates and is updated with preparations for more advanced development in the various areas of life: social, political, cultural and economic.

Quality education requires various factors and an effective and efficient process that prepares individuals in the ways outlined above. The education process uses human and material resources to achieve its objectives. Material resources should generate the right conditions for the process to take place properly. However, teachers are probably the most important ingredient in the process (once the material resources are in place). For instance, excellent material conditions without good teachers would not yield suitable results. This is why recent times have seen education policy definitions prioritize teacher development. OREALC/UNESCO Santiago has recently systematized this topic using a set of priorities with three components: initial teacher training, ongoing training and development and/or strengthening of the teaching career (in a framework of performance improvement). For initial training, it is vital to have good-quality study programmes that are relevant to the reality awaiting the teacher once qualified. For ongoing training,

68 *Economist, international consultant and post-graduate tutor (Costa Rica).*

it is essential for teachers to update and strengthen their capacities as a process of training while in practice (in order to avoid actions that do not have a suitable impact on teachers' day-to-day work). Lastly, the teaching career is a way of acknowledging the value of teachers, in a context of appropriate performance assessment. These three components should act in an integrated and harmonious way to provide high-quality teachers as resources that ensure that the education process is properly implemented.

In the light of the above, education economics is concerned with how society's process of resource allocation affects education development (in which public policy dynamics play a key role). The background to this in the past 20 years is a reappraisal of education, and this means that any analysis of education economics tends to study the extent to which the resource allocation process gives effective priority to education itself. Given that teachers are seen as a strategic resource, this analysis places a special emphasis on teacher policies. In this sense, there are several visions of teacher policies in academic discussions and in the dynamics of technical and political definitions of education economics.

Economic analysis has two dimensions; macroeconomics and microeconomics. The visions emerging from teacher policy economics in the past 20 years are relevant to both dimensions. This document aims to present those visions.

In macroeconomic terms, the main focus is the financing and options for prioritizing education. In the 1980s, the fiscal deficit in many developing economies meant that any discussion of financing focused on correcting financial imbalances (with the prioritization of education seen as a secondary issue). Under this vision, which was the prevailing view within international financial institutions, education spending was just another item within total public expenditure. Any reduction in the fiscal deficit (by cutting spending) therefore affected education spending as much as other areas of public management. This was on the basis that, if the public sector reduced education provision in the light of lower public spending, then the private sector would step in to increase provision and become the main education provider.

However, the above-mentioned strategic discussion on human development from the 1990s onwards did reappraise education, as the macroeconomic importance of the fiscal deficit waned. Thus emerged the vision of strategic education funding aimed at finding ways of increasing the resources allocated to public education. This document describes what are now considered the strategic factors that need to be boosted to improve the financing of teacher policies as part of a policy to prioritize education in terms of these three components: initial training, ongoing training and professional teaching career. This vision does not reject private provision, which is seen as supplementing public services.

Assuming that the macroeconomic dimension improves levels of financing, microeconomic visions have emerged to complement the education economics approach in terms of teacher policy. In macroeconomics, the concern is how to increase resources while prioritizing education. In microeconomics, the concern is with optimizing those resources to ensure that the education process achieves the best performance with its own factors (and teachers in particular). There are therefore various views that emphasize at least one of the following two strategic aspects: efficiency and quality.

In terms of efficiency, the idea is to use human and material resources in a way that benefits the education process as much as possible. As teachers are the main resource, there is a vision about how they can best be used (particularly using the teaching career as an operational mechanism to achieve this by combining performance assessment with an incentive system).

Quality is also related to resource characteristics. In other words, having good material and – especially – human resources (in the form of teachers) is vital for achieving good educational results. In this sense, teacher training is vital – both during initial learning and through the development of professional practice. Visions that relate to improving initial teacher training and in-work training are therefore essential.

In addition, there is a vision of public sector budgets that integrates macroeconomic and microeconomic concerns. This approach is known as *performance budgeting*. This form of budgeting has been implemented in developed and developing economies. The education sector is beginning to adopt this approach that prioritizes funding based on a rigorous justification of resources requested for each budgetary cycle through the formulation of clear targets and associated costs.

This document uses the broad and exhaustive vision of teacher policies developed in systematization processes driven by OREALC/UNESCO Santiago as a basis for reflection on the importance of incorporating categories from education economics to improve teacher policy management. In this sense, the document reflects on internal areas of action for the education sector, as well as identifying aspects of public policy management that are outside the area of education. In other words, incorporating categories from education economics introduces contextual aspects to the analysis that are not controlled by sectoral decision-making bodies. This combination of factors must be studied to understand the influence of aspects outside the education sector and to act on internal areas that, in the light of the current context, need to achieve efficient and effective management.

1 Strategic reflection of education financing

In the 1990s, education financing was first analysed on the basis of macroeconomic and fiscal issues. The main concern was around the total magnitude of resources allocated to the education sector. This was in response to the fact that many developing countries were lagging behind in terms of the human and material resource allocations in their education systems. The discussion on education funding took place as part of wider reflections on human development. The most advanced analysis of development strategies put forward a broad approach with economic and social elements that viewed development as a process involving multiple relationships between various fields of welfare management. In this sense, the material dimension should generate expansion and create the wealth base to facilitate an increase in resources for satisfying people's needs. However, it was also established that the human factor was essential for generating wealth, and that production required people with the right education and health (as well as other social aspects). With this in mind, education funding was seen as an instrument

of development, as it was providing the resources for the development of increasingly fully realized individuals (and an associated growing production capacity).

The background to this was in the 1980s, when several intellectuals brought together by UNICEF called for the economic changes of the time to have a human face. The Adjustment with a Human Face proposal emphasized the importance of growth meeting certain social benefit criteria. In other words, economic growth that did not generate social improvements was not a valid contribution to national development.

UNDP then proposed the concept of human development, as a way of strengthening the various dimensions that needed to be interlinked. This strategy posited the need to generate growth as the material basis for each country's progress. At the same time, the proposal stated the need to create the human basis for material growth. This is particularly relevant at a time when technological progress requires increasingly complex processes to be carried out by highly productive people with the right knowledge and creativity (rather than a repetitive process as in the twentieth century). This was an understanding that human development was achieved through a virtuous circle of shared determination in economic and social matters. Social development requires economic growth, and a sustainable material expansion needs social development. In this context, development policy is about strengthening the interrelationships between the economic and social spheres.

In Latin America, ECLAC joined the human development discussion with its proposal for productive transformation with equity, which was presented in the early 1990s. The Commission had long maintained that Latin American and Caribbean countries had a structural heterogeneity that limited the potential for good economic growth. There are modern sectors with capacity for expansion, and these tend to be the ones based on export production. There are also many sectors lagging behind and with no capacity to grow in accordance with modern requirements. One of the main tasks of development in the region is therefore to modernize all production structures. ECLAC posited that the region's production systems could only be improved as part of growing globalization if technical progress was widely embraced. However, the systematic dissemination of technical progress needs people who are fully developed in terms of health, education and other social factors. As a result, this proposal also sees individual progress as an ingredient in the development strategy, and this is why genuine productive transformation must go hand in hand with equity.

UNESCO was part of this reflection and joined ECLAC in proposing that strengthening the coverage and quality of education was vital for boosting the competitiveness of Latin American and Caribbean economies. In other words, there is a close link between the development of human resources and development in general. The financing of education must therefore be part of a development strategy based on technical progress and social equity. This proposal gave rise to the idea of education and knowledge as being the keys to productive transformation with equity.

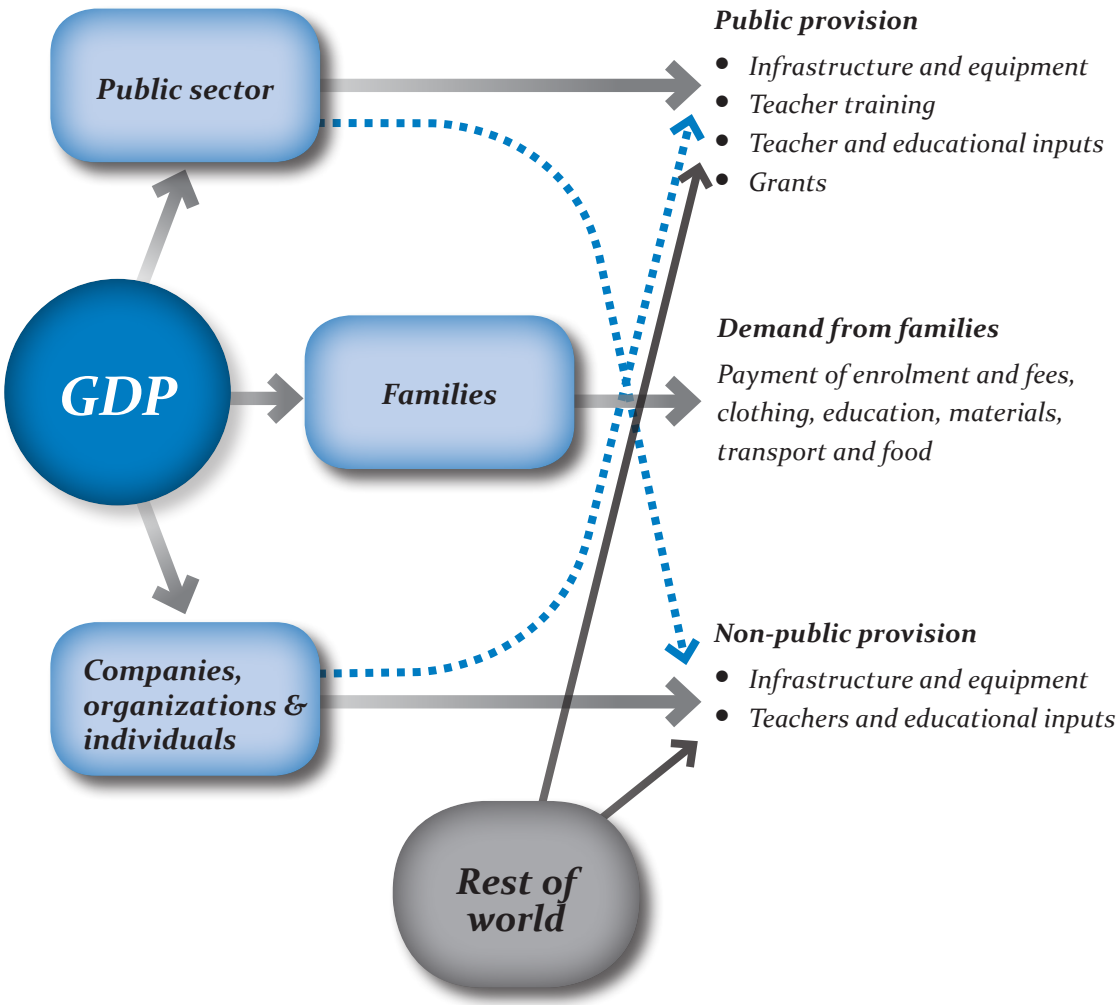
As part of the discussion of development strategy, the current approach to education funding needs to be understood in its macroeconomic and fiscal dimensions. This means that development requires investment in education, while also investing in other aspects of the productive expansion process.

2 Macroeconomic and sectoral factors of education financing

Education financing mechanisms

An analysis of education financing should begin with identifying the sources of resources channelled into the sector. In this regard, it should be mentioned that the education system is basically financed from sources that depend on national wealth. The public and private sectors obtain resources generated from the country's economic activities. As a result, the starting point for education financing is each country's gross domestic product (GDP). Figure 1 shows the usual sources of resources for funding education activities.

FIGURE 1. EDUCATION FINANCING MECHANISMS



The public sector is responsible for most education activities, and these are funded through the tax system. Taxes are obtained by collection mechanisms related to the level of GDP. It is also possible to supplement public financing through borrowing, although the latter accounts for a smaller proportion. Some countries do not collect enough tax to cover most of the financing, and these nations often have strategic natural resources (oil or copper) that are exploited to generate vital resources for State action.[69]

The public sector uses its resources to run a significant proportion of schools, with high levels of spending on educational equipment and infrastructure, teacher training, recruitment, purchase of educational materials and student grants.

Furthermore, the public sector in some countries supports the activities of non-governmental education centres through grants for specific expenditure relating to staff recruitment and/or purchase of materials.

The non-government sector provides some education services, in the form of education companies that receive private investment. This financing comes from the income of private economic agents (which may be private companies, non-governmental organizations or individuals). This income comes from national economic activity, which means that GDP is also the basic reference point for this source of funding. In its education provision, the non-government sector has similar outlays to the public sector when it comes to acquiring human and material resources.

The non-government sector often supports public sector provision though private contributions to improve the service provided by the most disadvantaged schools.

In addition to public and private sources, families need to engage in additional spending for pupils to attend school. Families spend on enrolment and school fees (if their children attend private schools). However, families also spend money on school clothes, school materials, food and transport. The latter applies irrespective of whether pupils attend public or private school.[70]

As a result, a country's education spending is the result of combined efforts involving a wide variety of participants in the education process.

These efforts can be supported by external resources, or what is technically known as "the rest of the world". Other national governments, private bodies and international financing agencies tend to provide resources to finance education. This financial support can be in the form of credit or a donation mechanism. Along these lines, some low-income countries with high poverty rates have financing mechanisms based on external donations (although the latter fluctuate on the basis of external cooperation conditions). These resources can be allocated to public provision or non-government provision.

These mechanisms reveal that education provision can be generated by the public sector and the private sector. In this sense, recent decades have seen many different visions of the role that each sector should play in education funding. In the 1980s, as

69 *ECLAC, UNESCO-O´REALC, IIPE/UNESCO (2009).*

70 *ECLAC, UNESCO-OREALC, IIPE/UNESCO (2009).*

development models based on domestic markets and major State intervention reached their financial limits, considerable emphasis was placed on the fiscal deficit issue. The prevailing vision was therefore aimed at correcting financial imbalances, based on a short-term view with limited long-term consideration for strategic development factors. As a result, less priority was given to education. That vision considered education spending as just another item within total public expenditure. Policies to narrow the fiscal deficit by cutting spending therefore resulted in public education suffering the same kind of contraction as those experienced by other sectors under public management.

As a result, this vision also maintained that the private sector should increase its involvement in education provision (to solve the reduced education activity of the public sector). This gave rise to the issue of ability to pay among the most disadvantaged social groups, and options were devised to subsidize the education costs for the lowest income families.

However, the aforementioned strategic reflection on human development changed the understanding of the balance between public and private sectors in education funding. Another factor in this change was an improvement in the macro-financial conditions that made it possible to bring down the fiscal deficit. This gave rise to a more strategic vision of education financing aimed at finding viable ways of increasing the resources allocated to public education. Below is a description of what are now considered the strategic factors that should be boosted to improve the funding of education policies. In this context, education policies are of key importance and are afforded greater priority in the process of resource allocation.

It should be stated that private provision still has its place in this vision, but it is considered as supplementing public services.

Education financing as a tool for strengthening teacher policies: a strategic vision of prioritizing education[71]

According to the above, public resources for education are allocated as part of a financing process shaped by various macroeconomic factors. In this sense, education funding should be understood as resource management under macroeconomic restriction, which makes it part of the allocation of society's limited resources.

In this approach, the basis for resource allocation is the scale of revenues produced by the economy (which is measured by GDP). This fundamental aspect establishes differences in the education funding capacity of various societies, as not all have the same income-generation capacity. Unequal production capacities therefore result in varying material foundations that shape the possibilities of increasing the allocation of resources to education.

Given the scale of overall economic revenues, the public sector's resource-absorption capacity should be studied. GDP growth alone does not guarantee additional resources

71 *Based on Esquivel (1995).*

for the public sector. Achieving this requires decentralized education agencies and the ministry of finance/economy to have effective revenue-capture mechanisms. A tax system needs an adequate capacity to capture resources, and this requires national political willingness to decide to finance the public sector in set proportions. Societies also differ in their capacity to finance education, as national taxation decisions are very uneven among countries. Although public institutions can use borrowing to improve their spending capacity, this is often not the best option as it jeopardizes future financial stability. Tax financing and borrowing therefore define the level of public spending (S), and the public sector's financing capacity is reflected in the ratio of spending to GDP. This ratio is the proportion of GDP used for public spending (ß). So public spending can be calculated as:

$$S = GDP\ ß$$

As a result, public spending increases in proportion with the rise in GDP (given the ß proportion).

However, improving public spending does not guarantee higher spending on education. That would require the will to provide education with an additional allocation in governmental resources. In other words, priority must be explicitly given to education. As a result, resources obtained must be channelled in the direction of education. If not, other sectors will absorb the improved funding. The priority given to education can be measured using the ratio between education spending and public spending. This is calculated as the portion of public spending used in the education sector, expressed as **Φ**. This percentage reflects the public sector's internal willingness to prioritize education through some of the resources captured. There is therefore no reason to expect education spending to respond directly to an overall increase in public-sector spending. There are many possible variations in this regard. Just as education spending can rise, it can also decrease (on the basis of **Φ**). There are times when education spending remains constant or even increases, despite a reduction in public spending (thanks to being assigned a higher priority).

In the light of the above, the public sector's spending on education (S_{edu}) can be calculated as follows:

$$S_{edu} = S\ \Phi = GDP\ ß\ \Phi \qquad (1)$$

This analysis of education spending is based on the UNDP work on the determining factors of social spending in terms of the formulation of a human development strategy (based on a virtuous circle of development). As stated, the UNDP proposal sees development policy as reinforcing the mutual links between material growth and human development. In this context, improving the financing of the public sector's social activity involves strengthening the link between the material and social spheres. A country that invests in its human development is better placed to develop economic growth. In terms of education, this means that the fruits of economic growth should reach public education through the strengthening of factors ß and **Φ** (1).[72]

72 *UNDP (1996).*

As a result, changes in education spending are the result of three factors: GDP performance, public sector's spending capacity (represented by its relative size within the economy) and the priority given to education. There is therefore no way of foreseeing how the macroeconomic climate and fiscal context will impact education. What is needed is an analysis of each specific situation to discover precisely how each factor is developing, in order to establish the right causality in each case.

Analyses in this context often use the ratio of education spending to GDP. This is calculated by dividing education spending (S_{edu}) into GDP. However, using this indicator may be risky. Although the idea is to give higher priority to education by setting minimum levels of this percentage, a more detailed analysis shows that that the S_{edu}/GDP ratio concerns more than just educational priority. In terms of algebra, the S_{edu}/GDP ratio is the result of multiplying the public spending capacity (ß) by education priority (**Φ**). Therefore, when the S_{edu}/GDP ratio is used to prioritize education, it overlaps with **Φ**. This runs the risk of generating unhelpful clashes with the government's financial authorities. If the economy or finance ministry is asked to allocate more spending for education without more resources (in the form of ß), the ministry is being pressured to spend more and create a certain financial imbalance for the government. This mistake can occur if the S_{edu}/GDP ratio is not used correctly. This means that an education financing policy based on that indicator may be well intentioned but inaccurate if the ß factor is not given due consideration. As a result, pressuring the finance ministry to provide more resources through S_{edu}/GDP without considering how to improve government financing could make the ministry an enemy of education funding. The aim is for the ministry to be the education sector's friend, as explained in the final section on proposals.

As this document analyses teacher policies for basic education, it is worth adjusting equation (1) to provide a more accurate reflection of spending on basic education, which is just a part of total education spending. In this context, basic education is understood to mean pre-primary, primary and secondary. Public spending on basic education (S_{bas}) can therefore be expressed as follows:

$$S_{bas} = GDP\ ß\ \Phi\ \alpha \qquad (2)$$

where:

α: share of basic education within total public education spending.

Lastly, basic education spending aims to serve a specific population group throughout the three main levels of education. As a result, the cost per student (S_{bas}/STU) must be calculated on the basis of (2) to understand the impact on the population. This calculation gives the following average spending on basic education:[73]

73 *See the methodological annex for the mathematical demonstration of the equation (3).*

$$\frac{S_{bas}}{STU} = \frac{GDP}{POP}\ ß\ \Phi\ \alpha\ \frac{1}{POP_{edu}/POP}\ \frac{1}{COV_{bas}} \qquad (3)$$

where:

STU: number of students in basic education

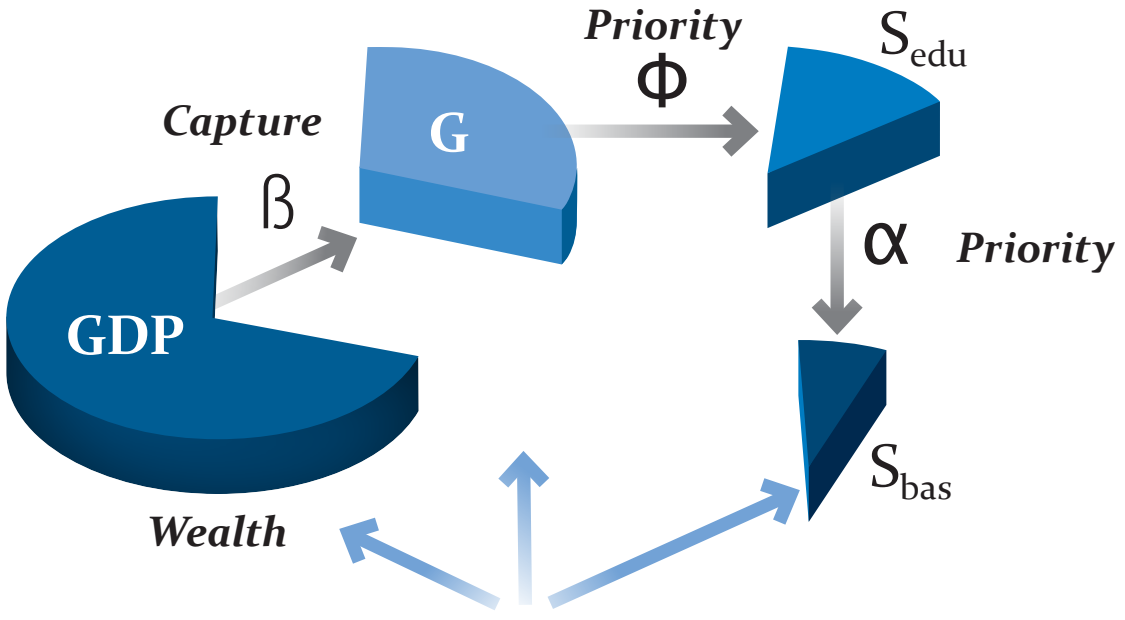
GDP/POP: gross domestic product per head of population

POP_{edu}/POP: population of basic education age as a proportion of total population

COV_{bas}: public coverage of basic education

Figure 2 shows the determining factors of public spending per student on basic education, expressed in equation (3). As well as differences in per capita income, average spending patterns are also influenced by the above-mentioned distributive elements: ß, Φ and α. In other words, for economic growth to benefit public spending on basic education, the following three different distribution factors need to be managed: public spending capacity, priority given to education and priority for basic education. From the viewpoint of average spending, there are two population factors that are relevant: share of the school age population within total population (POP_{edu}/POP) and the public sector coverage of this school-age population. Given a certain level of per capita GDP and ß, Φ and α factors, any increase in the relative size of the school population (within total population) will push down average spending. This is understandable because the rise in such population factors would mean total basic education spending having to be spread among a higher number of students.

FIGURE 2. DETERMINING FACTORS IN PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION



3 The financing of teacher policies in Latin America and the Caribbean, against the backdrop of the international situation

The functioning of equation (3) has been applied to certain groups of countries seen as interesting case studies for illustrative purposes. These case studies are useful for defining roadmaps for teacher policy financing. The cases analysed are as follows (the group name used in the document is given in brackets):

- Some Nordic countries (Nordic)
- Some high-average-income European countries (High Euro)
- Some South-East Asian countries (South-East Asia)
- Some high-income Latin American and Caribbean countries (compared to the rest of the region) (High LAC)
- Some Latin American and Caribbean countries with medium average income (compared to the rest of the region) (Middle LAC)
- Some Latin American and Caribbean countries with low average income (compared to the rest of the region) (Lagging LAC)

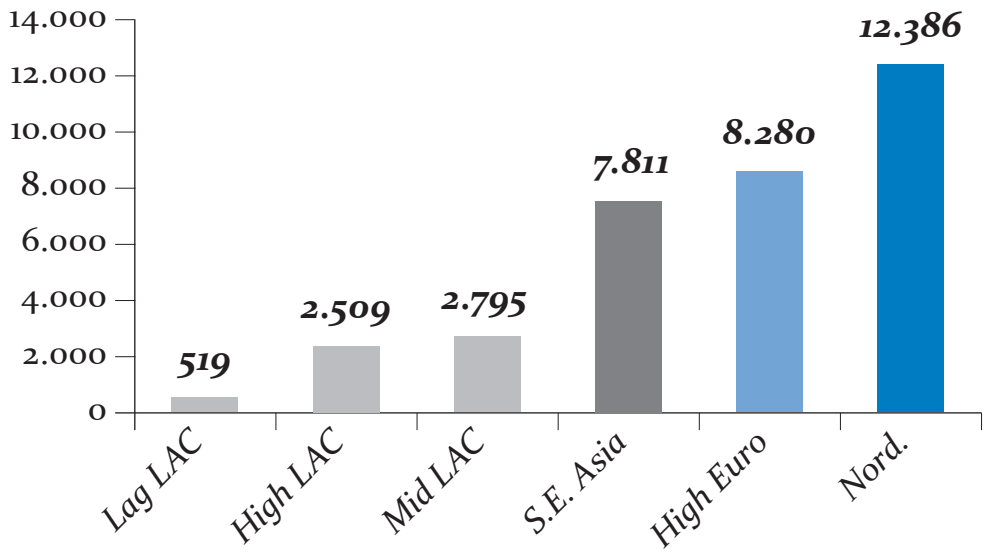
The methodological annex lists the countries used as a reference point for the cases mentioned. It should be stated that the information takes the form of "stylized data". This means that the country information used has been averaged out and adjusted for the purposes of this document, such that the calculations shown below do not reflect the reality of any individual country. In order to be able to apply equation (3), it was also necessary to combine two different kinds of source: the UNESCO Institute for Statistics (UIS) and the International Monetary Fund (IMF). Although both are high quality sources, combining them introduces approximations that make it difficult to apply the data to specific countries (which is why they must be used at the aggregate level without providing detail on countries). The calculations are therefore mere orders of magnitude to provide an idea of what is happening (as generic situations). The data presented cannot therefore be associated with any particular country. The calculations should be seen as illustrations to apply equation (3) that are useful in this document for giving an idea of the determining factors in average spending on basic education (with an emphasis on teacher policies). Applying equation (3) to a specific country in a detailed and systematic way would require a separate study that is beyond the scope of this document. Countries are called on to apply equation (3) with uniform data complied from national information sources.

Graph 1 shows the current level of public spending per inhabitant on basic education, calculated using dollars with purchasing power parity (PPP).[74] The differences can be

74 *Purchasing power parity (PPP) is a way of expressing monetary value for all countries to make them comparable at a given moment in time.*

explained using equation (3). Graph 2 provides information on aspects of the equation in terms of basic education (although these are not comparable with data traditionally published on education as a whole).

GRAPH 1. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION.
ILLUSTRATIVE AVERAGES OF SELECTED CASES
IN CURRENT PURCHASING POWER PARITY DOLLARS OF 2012



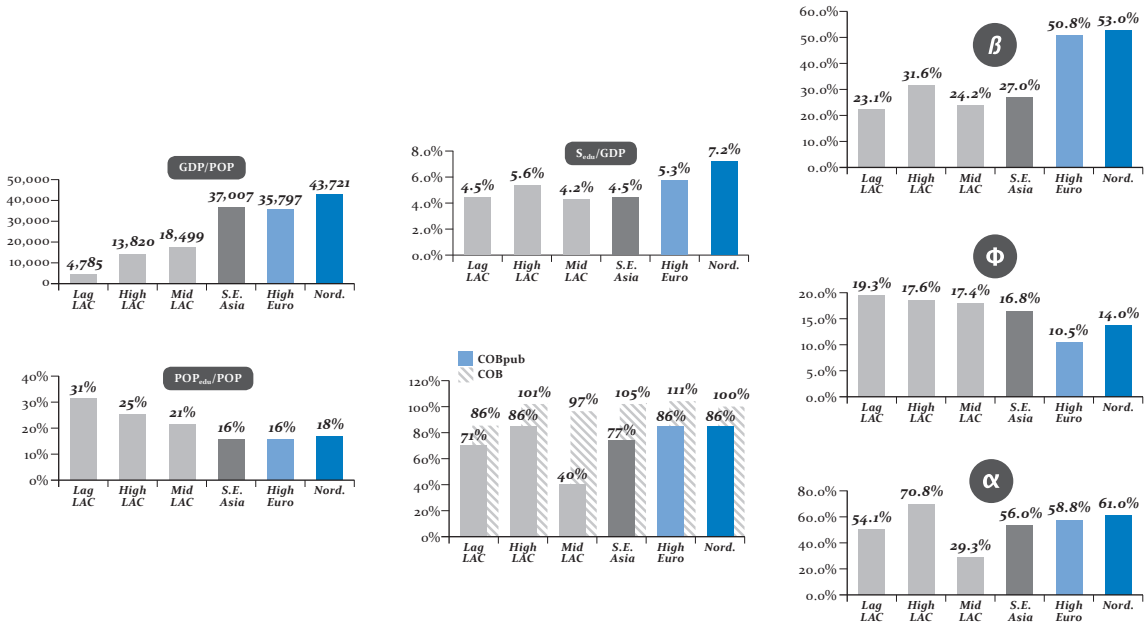
***Source:** Prepared by the author, on the basis of information from the UNESCO Institute for Statistics and the International Monetary Fund.*

As shown in Figure 2, a major cause of difference among countries is per capita GDP. Graph 2 shows that Nordic, High Euro and South-East Asian countries have high average levels of wealth compared to the Latin American and Caribbean groups. This may point to average spending on education being higher there also. However, this depends on distributive factors ß and Φ.

In terms of the public sector's spending capacity (ß factor), the Nordic and High Euro countries have much higher levels than other groups. In these high-level nations, the country's average wealth is more intensively channelled towards the public sector. Although the priority given to education (Φ factor) there is lower than in South-East Asia and Middle LAC countries, education spending benefits Nordic and High Euro countries more thanks to the ß factor. The combination of ß and Φ (through the multiplication of both factors) yields a higher S_{edu}/GDP ratio in Nordic and High Euro countries. In other words, the S_{edu}/GDP ratio in the Nordic countries (7.2%) and High Euro countries (5.3%) is higher than in South-East Asia (4.5%) and Middle LAC countries (4.2%), thanks to the larger relative size of their public sectors.

In a comparison between Lagging LAC or High LAC countries and Nordic or High-Euro countries, the differences in the S_{edu}/GDP ratio are also due to differences in the ß factor, although the **Φ** factor was more significant in the former group. Interestingly, Lagging LAC and High LAC countries report a S_{edu}/GDP ratio that is equal or higher to Middle LAC and South-East Asia, which is because their ß and **Φ** factors are equal or higher to the latter groups. The priority given to basic education (the **α** factor) is higher in Lagging LAC and High LAC countries. However, basic education spending per student in Middle LAC and South-East Asia is higher than in Lagging LAC and High LAC countries (according to graph 1). The explanation lies in differences in the material base. The average wealth of Middle LAC countries and South-East Asia is higher than in Lagging LAC and High LAC countries. As a result, the results given in graph 1, combined with the determining factors from graph 2, show that the S_{edu}/GDP ratio alone does not explain education funding. It is therefore necessary to broaden out the discussion to determining factors from equation (3) and Figure 2.

GRAPH 2. DETERMINING FACTORS OF PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION. ILLUSTRATIVE AVERAGES OF SELECTED CASES IN CURRENT PURCHASING POWER PARITY DOLLARS OF 2012



Source: Prepared by the author, on the basis of information from the UNESCO Institute for Statistics and the International Monetary Fund.

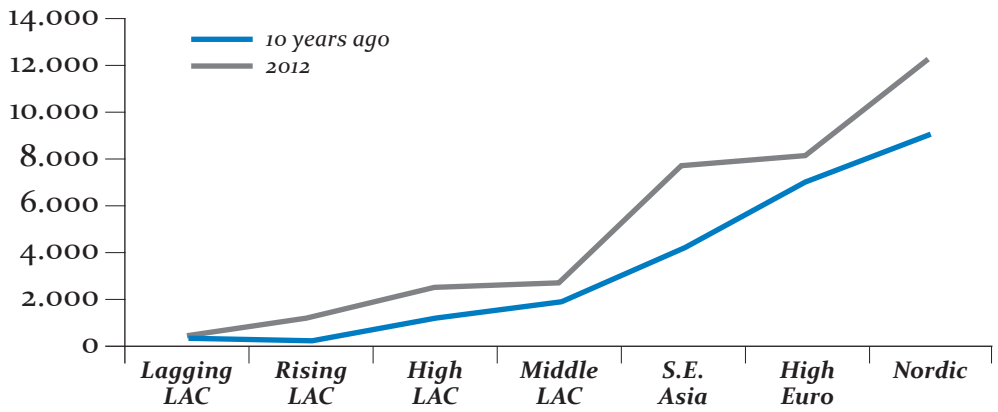
Demographic factors also play a role in explaining differences in average spending on basic education. According to graph 2, the school-age population is relatively smaller in South-East Asia, High Euro and Nordic countries (compared with Latin American and Caribbean groups). In the former, population ageing means that younger age groups represent a smaller percentage of the total population. Education spending is therefore

higher per student thanks to greater average wealth, better distributive factors (in the Nordic and High Euro countries) and reduced demographic pressures.

As the level of coverage of public provision (COV_{pub} in the graph) is relatively similar in Nordic, High Euro, South-East Asia and High LAC countries, it does not play a major role in explaining differences in average education spending. In Lagging LAC countries, coverage is lower and this brings down average spending (with fewer students to cater for using total expenditure). However, raising coverage in such countries is a matter that still remains pending. As shown in graph 2, total coverage of public and private provision (COV in the graph) stands at 86%. If total coverage is increased in terms of public provision, the change will not be real, as increased enrolment will put pressure on average spending. In Middle LAC countries, public coverage is somewhat lower (40%), but total coverage is almost 100%. This shows that private provision is playing a greater role than in other groups of countries. However, the levels of coverage are such that there is no need to increase public provision (which means that there will be no increased enrolment to place pressure on average spending).

Relevant quantitative changes in the education sectors occur over long periods. It is therefore important to review changes in the allocation of resources to education in the groups of countries over a significant number of years. Graph 3 shows spending per student on basic education 10 years ago (blue curve) and at current levels (red curve). Respectable increases can be observed in all cases except Lagging LAC countries (which posted a very small increase).

GRAPH 3. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION. ILLUSTRATIVE AVERAGES OF SELECTED CASES IN PURCHASING POWER PARITY DOLLARS OF 2012 (CURRENT AND 10 YEARS AGO)



Source: Prepared by the author, on the basis of information from the UNESCO Institute for Statistics and the International Monetary Fund.

Table 1 shows the indicator's determining factors based on equation (3) and Figure 2. Nordic and South-East Asian countries saw the greatest improvements. This increase in average education spending was based on higher per capita GDP (especially in South-

East Asia). Some countries also experienced average rises in wealth similar to the Nordic countries (where economic growth was less intense than in South-East Asia). This leads to the following strategic question: why does education spending increase so much in Nordic countries if the economy grows at similar rates to Middle LAC and High LAC countries? The answer lies in the fact that the ß factor yields a higher S_{edu}/GDP in Nordic countries. A rise in per capita GDP therefore generates a greater benefit for education spending, thanks to a stronger public sector in Nordic countries.

High Euro countries posted a smaller increase owing to more limited economic growth. Although these countries share the Nordic nations' high capacity to capture benefits through the public sector's spending capacity, their economic problems prevented them from providing the material basis for public spending rises.

At the opposite extreme to Nordic countries are the Lagging LAC countries. They had limited economic growth and a lower S_{edu}/GDP ratio as a result of a smaller ß factor. In other words, Lagging LAC countries experienced slow economic growth and a lower public spending capacity, which resulted in a very limited increase in average education spending.

TABLE 1. DETERMINING FACTORS OF PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION[75]
ILLUSTRATIVE AVERAGES OF SELECTED CASES
IN PURCHASING POWER PARITY DOLLARS OF 2012 (CURRENT AND 10 YEARS AGO)

	GDP/POB		S_{edu}/GDP		ß		Φ		α		POP_{edu}/POP		COV_{pub}		COV	
	Diez años antes	Actual	10 years ago	Currently	10 years ago	Currently	10 years ago	Currently	10 years ago	Currently	10 years ago	Currently	10 years ago	Currently	10 years ago	Currently
Lagging LAC	4,117	4,785	4.0%	4.5%	23.5%	23.1%	16.8%	19.3%	46.5%	54.1%	35%	31%	58%	71%	73%	86%
Rising LAC	6,450	8,841	1.3%	4.9%	16.3%	36.0%	8.0%	13.6%	54.1%	54.1%	27%	25%	64%	74%	83%	105%
High LAC	10,833	13,820	4.2%	5.6%	29.6%	31.6%	14.1%	17.6%	68.9%	70.8%	29%	25%	87%	86%	99%	101%
Middle LAC	12,955	18,499	3.9%	4.2%	22.1%	24.2%	17.5%	17.4%	47.3%	29.3%	25%	21%	50%	40%	93%	97%
S.E. Asia	26,452	37,007	3.7%	4.5%	26.3%	27.0%	14.2%	16.8%	56.5%	56.0%	18%	16%	71%	77%	94%	105%
High Euro	33,313	35,797	5.0%	5.3%	46.7%	50.8%	10.6%	10.5%	62.5%	58.8%	17%	16%	85%	86%	106%	111%
Nordic	38,710	43,721	7.0%	7.2%	49.9%	52.7%	13.9%	13.6%	58.1%	61.3%	20%	18%	86%	86%	97%	100%

Source: Prepared by the author, on the basis of information from the UNESCO Institute for Statistics and the International Monetary Fund.

75 *COV is total coverage for basic education (including public and private provision).*

Graph 3 introduced a previously unstudied case: low- or middle-income Latin American and Caribbean countries with a significant rise in education spending per student (Rising LAC).[76] The graph shows that this category had low average education spending 10 years ago. More recently, however, the indicator improved significantly (much more than in Lagging LAC countries). As to why this would be, Table 1 shows that moderate economic growth (in terms of per capita GDP) partially explains the improvement. However, the bulk of the increase in education spending per student is due to an increase in the ß factor, which went from 16% to 36% (accompanied by a less dramatic improvement in the Φ factor). As a result, the S_{edu}/GDP ratio went from 1.3% to 4.9%. In Rising LAC countries, more important than economic growth is the substantial improvement in the determining distributive factors of equation (3) and Figure 2. Interestingly, Table 1 shows that public sector coverage rose from 64% to 74%, thus helping to achieve total coverage of 100%. This means that improved financing of public education significantly increased average spending while also facilitating a great improvement in coverage. The Rising LAC category therefore provides a strategic path for financing: improvement requires changing the factors of equation (3) in a sustained way. Without these changes, financing will not improve.

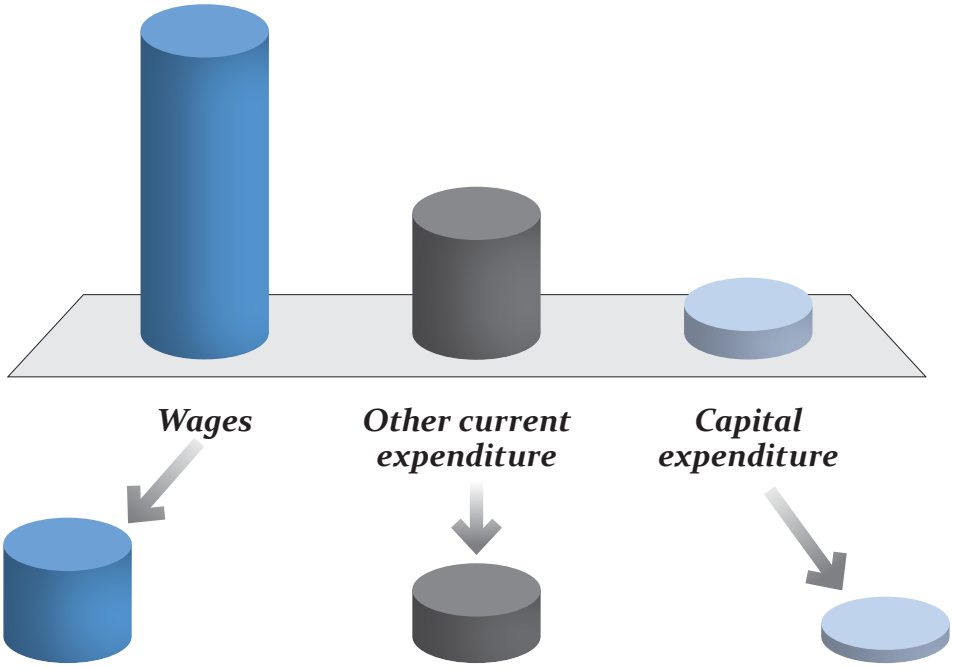
The rising LAC category shows that some of the improvement in the financing process relates to the country's political willingness in terms of mechanisms to capture government resources. Improving ß and Φ, factors will always involve changing the tax structure. As a result, increases in financing for teacher policies and education quality in general are associated with a strategic factor for the development of the region's countries – distribution of resources (which in this case is driven by the tax structure).

4 Teacher policies in basic education spending

Analysis of spending on basic education is important because it reveals each country's outlays on teacher policy. First and foremost, education is a service that is fundamentally dependent on teachers as human resources. In macroeconomic terms (as a production process analysis), education is a labour-intensive activity. As a result, much of the improvements to this education resource will usually have repercussions in terms of salary (which is the largest cost item in service provision). Teachers as human resources also require material elements to carry out their work. As a result, teacher policy must consider infrastructure, equipment, material and other conditions that define the setting in which education is delivered. In other words, teacher policies are part of the cost of basic education. The importance of teacher policies in the cost of education production will depend on the decisions taken by each country.

76 *The reference country is given in the methodological annex.*

FIGURE 3. TEACHER POLICIES IN THE STRUCTURE OF PUBLIC SPENDING ON BASIC EDUCATION



Teaching policies

- *Performance-related incentives*
- *Increased teacher recruitment to reduce class sizes*

Teaching policies

- *Teaching material and text books*
- *Grants for initial and ongoing teacher training*
- *Studies to generate standards for teacher performance*

Teaching policies

- *Suitable infrastructure for good teacher performance*
- *Appropriate equipment for good teacher performance*

This concept is presented in Figure 3. OREALC/UNESCO Santiago has defined three basic areas for the development of teacher policies: initial teacher training, ongoing professional training/development and the teaching career.[77] Action implemented in any of the three areas would be expected to have an impact on education costs. The classification of costs according to the accounting rules of public budgeting involves pre-defined cost headings that are universally used. These headings are known as "objects of expenditure". The three main headings (with a certain level of aggregation) are wages, other current expenditure and capital expenditure.

The above figure mentions some of the recently adopted action lines and classifies them under the relevant object of expenditure. For instance, pay incentives should push up wages, or a policy to reduce the number of students per teacher should increase the number of teachers hired (thus increasing the total wage bill). Similarly, other current

77 *UNESCO-OREALC (2012).*

expenditure would rise if teaching materials were increased or grants awarded to improve initial teacher training or ongoing training. Lastly, spending on infrastructure and equipment to create the right conditions for the education process would be reflected in capital expenditure. These are just a few examples of actions recently suggested by OREALC/UNESCO SANTIAGO. There are obviously more actions to be developed that could be classified by object of expenditure if they have an impact on the cost of education provision.

It would be ideal to have cost information on the various actions resulting from teacher policies, in order to discover their cost implications. In this regard, having such information for each country would facilitate international comparisons and the analysis of evolving teacher policy costs over time in a single country. However, the reality of the current statistical system for the education sector does not make this possible. The UNESCO Institute for Statistics (UIS) annually collects information on education spending in all countries. The information quality is high enough to carry out international analyses. Indeed, the above-mentioned calculations on education financing are partly based on statistics from UIS. In terms of education spending, UIS presents data on objects of expenditure using the aforementioned disaggregation: wages, other current expenditure and capital expenditure.[78] However, UIS does not provide a sufficient level of disaggregation to observe the effect of teacher policies on education spending. The reason for this is simple: countries do not generate such data. As a result, UIS information is limited to the upper portion of Figure 3: overall data on objects of expenditure with no specific data on what teacher policies cost.

For Latin America and the Caribbean, this is understandable in the context of teacher policies. According to OREALC/UNESCO Santiago, teacher policies usually focus on isolated aspects without systematically tackling each of the three main areas. For instance, there may be actions concerning initial teacher training that have no link with the teaching career. Or, there might be pay incentives with no intervention in terms of quality of initial teacher training. Teacher policy areas are therefore developed in a piecemeal way with no coordination and a limited impact.[79] In addition, the overlap and absence of continuity in teacher policies are against a backdrop where there is a lack of long-term vision.

It is therefore impossible to develop a broad and integral approach to teacher policies, which leads to inefficient management of education resources. Given this context, teacher policies are shown to be given low priority, although investment in teachers is significant given the labour-intensive nature of education. It is therefore no coincidence that there are no systematic economic data on teacher policies in the region.

The above reflections apply to Latin America and the Caribbean. Interestingly, however, UIS has no explicit economic information on teacher policies. This shows that many countries (irrespective of their level of educational development) have a limited tradition of recording spending information on teacher policy. The reason for this is a budgetary system that does not capture the effect of teacher policies on public spending. The programme structure of education budgets therefore tends to be organized as follows:[80]

78 *http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=143&IF_Language=eng.*

79 *UNESCO-OREALC (2013).*

80 *Sweden Ministry of Education: 2013 Budget.*

- Education of children, young people and adults
- University education and other higher education
- General education actions
- Financial support for students
- Central administration

This is the programme structure of the education budget in Sweden, which has a significant level of education investment. This structure does not show the effect of teacher policies. This structure shows that resources are spent on various levels of education, and that there are actions to benefit socio-economically disadvantaged students. However, if someone asks about education policy spending or questions whether Sweden has teachier policies, there is no simple and universal way of responding. Naturally, it is possible to ask the Swedish education authorities detailed questions and obtain some information. Asking the same of other countries will yield some basic data about the effect of teacher policies on teaching. It is almost certain, however, that the data provided will not be comparable (and their usefulness will vary from country to country). It is therefore vital for an entity such as UIS to compile information systematically.

It is well known that countries spend on teacher policies (with some spending more or less than others). However, what they spend is invisible (in simple and universal terms) in statistics on education spending. It is therefore vital to reveal the type and scale of spending on education policies, in order to find out countries' level of investment and its quality. It would be ideal to have information like that included in Figure 3, to find out the impact of teacher policies on each object of expenditure. It will not always be easy to separate precisely what is spent on that aspect, but significant progress can be made if the budgetary programme structure is improved. The final section of this document contains proposals and suggestions in this regard.

5 Macroeconomic dimension of teacher policies

Alongside all of this macroeconomic reflection, complementary microeconomic visions have also emerged. Without neglecting the clearly strategic macroeconomic and fiscal issues, other discussions have focused on microeconomic aspects. Macroeconomics is about expanding financing. Microeconomics is concerned with optimizing resources to generate good quality education. These visions have emphasized that education financing depends on the cost of education provision. In other words, the total sum of resources each country needs to finance is related to what it costs to acquire the human and material resources needed in the education process. There are at least three important considerations in this regard. First, the cost of education provision is influenced by the internal efficiency of the process, which in turn is linked to the dropout and pass rates of students. Second, cost also depends on the combination of resources and level of productive efficiency with which they are used. For instance, it is possible to engage with students more economically with a more intensive use of labour and inputs. It is also possible for the production cost of education services to vary from country to country based on the wages of teachers and the price of other resources. There are

countries where teacher wages are low because of a low cost of living, thus generating a resource advantage due to an external economic factor.

The issue of spending efficiency therefore becomes important in discussions on education financing. According to Morduchowicz:

> *Limited resources appears to be a factor that cannot be changed in the short term. Therefore, the possibility should not be ignored of improving the allocation of resources currently assigned. This is nothing more than streamlining spending (in this case, on education). Increasing efficiency does not simply mean reducing costs, as a parallel reduction in results would be adjustment (rather than efficiency). The latter implies the possibility of doing more with the same resources or doing the same with less.*[81]

There should therefore be an awareness of the need to maximize resources obtained through financial negotiation. Once a certain financing "ceiling" has been reached (based on the aforementioned macroeconomic factors), actions must be focused inwards to ensure the sector makes the best possible use of resources. From a medium- and long-term view, this means that increased financing does not necessarily guarantee better results. In order to improve the sector, it is vital to act on the microeconomic aspects that promote greater efficiency. The economic management of the education sector combines the negotiation of budgetary restrictions defined by macroeconomics with the implementation of operational planning tools that promote the best use of limited financial resources.

Furthermore, microeconomic discussions have put quality issues on the agenda. Along these lines, it is not seen as enough to guarantee a certain level of spending per student to adequately perform the task of financing the education sector. The quality of spending also needs to be analysed. While spending is a financial matter, it also concerns the quality of components acquired for the education process. There should therefore be a real analysis of the productive factors procured through spending, in order to specify the extent to which schools and the system as a whole are being equipped with the right teachers and materials to provide a quality service. Teacher improvement policies are essential in guaranteeing quality education.

Reflections on quality also relate to the outcome of the education process: namely how much has been achieved in terms of pupil learning. Investment in education is meaningful insofar as it turns out well-prepared people for the good of society.

In this context, there are various visions that emphasize yield of resources and the process quality. In terms of efficiency, the aim is to use human and material resources in a way that maximizes the benefit to the education process. As teachers are the main resource, there is a vision of how they can best be used (particularly using the teaching career as a mechanism to achieve this end). The aim is for the teachers to feel appropriately valued, which should impact on their performance. In this regard, it

81 Morduchowicz (2002 B).

is vital to generate performance assessment mechanisms that promote the two-way relationship: performance is assessed, while there is an incentive for good performance. In this case, teacher efficiency is reflected in the quality of education, as students reap the benefit of quality human resources.

Quality has also been studied from the perspective of teacher training. Good infrastructure and a good education team generate the right environment for the education process. The same applies to teachers, hence the interest in their training at two complementary times: initial training and ongoing professional development. In this regard, there are important ideas around strengthening initial teacher training and their in-service training.

The microeconomic sphere thus closes the circle of the strategic vision for prioritizing teacher policies. Macroeconomics focuses on prioritizing allocation of resources to education, with an emphasis on human development (and therefore on teacher policies). Microeconomics sees the importance of optimizing allocated resources through efficiency and quality approaches in which the three areas of teacher policies play a key role: combination of performance assessment with a system of teacher incentives, and initial and ongoing teacher training to generate the strategic factor in education quality.

Furthermore, OREALC/UNESCO SANTIAGO (2013) found that fragmentation, overlap and short-termism prevent the development of a broad and integrated approach to teacher policies, which in turn results in inefficient management of education resources. It is therefore suggested that the effectiveness of teacher policies be improved through actions including the following: [82]

- Leaving behind short-term approaches to define a medium- and long-term perspective
- Tackling fragmentation, overlap and duplication of actions and programmes from bodies responsible for teacher policies
- Boosting the stability of teacher policies, which usually suffer when political changes bring new senior managers
- Incorporating a multi-year approach in allocating resources to teacher policies.

This highlights the need to change budgeting to achieve a more efficient allocation of resources assigned to public education (and teacher policies in particular). It is widely accepted that conventional budgetary practices have limited the potential for applying innovative concepts. Traditional mechanisms have prioritized short-term fiscal administration that seeks above all to control public spending in order to avoid financial imbalance. However, the education sector needs a budget that facilitates more autonomous management on the part of its entities, as well as efficient use of resources in the context of the above-mentioned concepts put forward by Morduchowicz. In this sense, the challenge is to move towards performance budgeting (which is dealt with in the final section on proposals).

82 *UNESCO-OREALC (2013).*

In terms of strengthening teacher policies, spending quality and efficiency are relevant because they pave the way for improving financing. Insofar as teacher policy-makers can request resources based on new budgeting rules, they are more likely to successfully negotiate the sums required. The key to performance budgeting is the capacity to associate the work of the sector (in this case the education sector) with the resources requested. This is no mean feat. It is a challenge that involves time and institutional reorganization efforts. However, several countries took the plunge and are gradually achieving results (as described in the final section).

The efforts by OREALC/UNESCO Santiago to systematize actions to be implemented in the three areas of teacher policies represent significant progress in strengthening these policies.[83] As a continuation of these efforts from the viewpoint of education economics (in microeconomic terms), the next step must be to define the results expected of each proposed action and state the associated costs. Quality will improve once unit costs are established for the proposed actions. Conventional methodologies for allocating resources within the education sector have usually been based on unit costs. These average sums are calculated by dividing total expenditure by the number of students taught. These methodologies have mainly been useful for distributing resources from the central level to local bodies involved in education. However, such data on expenditure do not reveal details of efficiency or quality. As long as spending remains a monetary value in each national currency, it reveals nothing about the resources acquired or the quality thereof. Results-based management therefore requires a kind of analytical dissection of monetary value to break down the resources acquired, the quantities used, the results obtained and how resource prices affect the monetary value.

The challenge lies in moving from expenditure to cost. Expenditure is the amount of money that a finance or economy ministry allocates to the education sector. This is important macroeconomically to understand the level of economic restriction from determining factors in equation (3) and Figure 2. Cost is the outcome of the planned provision of education services, in terms of the real factors used (teachers, materials, infrastructure, equipment and other necessities) and the results expected from the use of these real factors. In this sense, the cost of education services is calculated on the basis of the monetary value of real factors, using the prices paid for them. If the education sector can complete this calculation, this will be a giant step forward in robustly negotiating budgetary resources with the financial authorities.

An interesting experience in this area is Brazil's method for calculating the cost of education quality targets. The country calculates cost per pupil associated with a minimum level of quality known as "*Custo Aluno-Qualidade Inicial*" (CAQi) (Cost of Initial Quality Education per Student).[84] This initiative arose out of the 2002 National Campaign for the Right to Education. The analysis of this unit cost is a tool used to assess shortfalls in education investment and to plan the process of increasing education spending on the basis of education quality. The CAQi is calculated on the basis of the human and material resources needed to achieve a minimum threshold of education quality. The calculation includes an appropriate level of teacher pay. The information is differentiated for each level of education.

83 *UNESCO-OREALC (2013).*

84 *Carreira; Rezende Pinto (2007).*

Law 10.172 on education planning uses the CAQi as an input for projecting education spending in local and national 10-year plans (on the basis of coverage targets). In this context, the CAQi provides information for calculating and distributing resources from the "*Fundo de Manutencao e Desenvolvimento da Educação Básica e de Valorização dos Profissionais da Educação*" (FUNDEB) (Fund for Primary Education Development and for Enhancing the Value of the Teaching Profession).

The law was passed because of major distortions in spending per student in various states. The highest average education spending per student used to be up to four times higher than the areas with the lowest levels.[85] The FUNDEB uniform distribution mechanism was created to remedy this. The Fund's resources are distributed at the local level based on enrolment in each area (on the basis of a standard unit cost). Generally speaking, the allocation of resources is the result of multiplying the number of students enrolled by the unit cost.

The above-mentioned mechanism is common in large countries with a high level of decentralized education management. However, the Brazilian experience incorporated value added by considering quality criteria in defining the unit cost. First, teacher policy was used to adjust the amount of the unit cost by increasing the wages of teachers with an effective practice by up to 60%. Then, a more systematic definition of quality was adopted using the CAQi for the standard calculation of the unit cost.

Table 2 summarizes the components of CAQi. The table shows that CAQi is based on real factors (teachers, education materials, infrastructure, equipment and other necessities) to give a unit cost: the matrix of components is defined and their respective prices applied to give the monetary value needed to obtain them. This reveals the cost of teaching one student at a given level of quality, measured in real factors (or resources) that will be used to provide education services. As part of operational costs, the table includes professional training (which corresponds to one of the key areas of action of teacher policies).

The CAQi methodology is seen as promoting a more transparent distribution of educational resources, as well as an effective incentive for attracting quality teachers to the system (with higher wages considered as part of costing). Incorporating CAQi in the resource allocation process has also given rise to a broader discussion around quality criteria in the education budget process. In recognition that the discussion of quality is shaped by financial restrictions (of limited resources), quality is accepted as being initial or feasible (hence the "i" for initial in the CAQi acronym).

All of this was possible because the law explicitly stated the need to consider quality criteria. The law established specific guidelines to: define minimum levels of quality of learning in education at a National Education Conference involving the education community.[86] This corresponds to the law's recommendation that the allocation of resources to education should be participatory, and that social control and support committees be set up for resources for the education system (regardless of whether they are from FUNDEB or any other source of funding). The Education Ministry's

85 *National Congress of Brazil (2001).*

86 *National Congress of Brazil (2001). Also see (online): http://www.youtube.com/watch?v=dm42VBrhcgk / http://www.youtube.com/watch?v=H9l88aL048I.*

National Education Council uses the CAQi to discuss the quality criteria in accordance with guideline CNE/CEB No. 8/2010 adopted in 2010. In these discussions, teacher policies are the lynchpin when it comes to defining quality criteria: the main challenge with quality is to promote the appreciation of education professionals, which requires reappraising their pay, organizing their professional career, developing initial and ongoing training and providing the right working conditions.[87]

TABLE 2. BRAZIL: MAIN COMPONENTS OF THE COST OF INITIAL QUALITY EDUCATION PER STUDENT (CAQI)

Cost area	Components
Facility infrastructure	· Classrooms · Administrative and teacher offices · Library · Kitchen · Information technology laboratory · Science laboratory · Recreation area · Bathrooms · Cellar · TV/video room
Equipment	· Physical education mats · Toys · Refrigerators · Kitchen equipment · Teaching materials · Televisions, DVD players and projectors · Class furniture · Administrative furniture · Computers, printers and photocopiers
Operations	· Teaching staff (full time) · Support and administrative staff · Water, electricity and telephone · Food · Replacement of teaching materials · Infrastructure and equipment maintenance · Professional training

Source: Carreira; Rezende Pinto (2007).

87 *Ministry of Education, National Education Council, Brazil (2010).*

This concept of cost associated with quality changes the mentality around the analysis of the cost of education and teacher policies. Previously, cost calculations were seen as the work of financial experts whose specialized knowledge made them the only ones capable of the job. In the context of experiences like CAQi, we can see that calculating costs is an interdisciplinary endeavour that combines the efforts of educators, education planners and financial experts. Education workers provide the essential sector content: the quality criteria that are the raw materials of quality costing. Financial experts complement this work by using flexible calculation tools that can be adapted to include such quality criteria.

The financial experts bring their knowledge on organization and calculation methods for budget headings, while education workers (as part of broad participation of all actors) bring their knowledge of education (and therefore the quality criteria to be achieved in the light of budgetary restrictions). This is a qualitative improvement in terms of the microeconomic tools, which has in turn been facilitated by information technology progress over the past 20 years. A key role in this regard is played by what is known as business intelligence, which processes large quantities of data and calculates a wide variety of patterns concerning the phenomenon in question. The financial expert thus facilitates, conveys and supports the use of business intelligence tools (in this case to calculate education costs). At some point in the process, education workers therefore becomes the main actors calculating the cost of quality, once they master the use of business intelligence tools.

The above is useful for the re-engineering of the education sector. Insofar as such user-friendly and flexible tools for calculating costs are available, education workers have the support to analyse various options and assess their economic impact. This makes it easier to choose the options and formulate feasible proposals in the light of each country's economic framework.

6 Categories for the management of teacher policy resources

The information in the previous sections is important inasmuch as it helps to establish categories for the management of resources for teacher policies. As stated earlier, the efforts of OREALC/UNESCO, to systematize the actions to carry out in the three areas of teacher policy represent a huge step forward in strengthening these policies.[88] This document aims to complement those efforts by indicating which categories might be useful from the perspective of education economics to lend viability to actions proposed as part of teacher policies.

88 *UNESCO-OREALC (2012).*

Below is a series of proposals on categories for the management of teacher policy resources. The proposals arose from reflections in previous sections of this document. The aim is to provide the region's government with initial guidelines on the basic aspects of increasing resources for teacher policies. This is general in nature, given the scope of the document. However, all proposals can be adapted to the situation of each country, provided that governments show an interest in this kind of option for improving the funding of education policies.

Long-term financial planning to strengthen teacher policies

The OREALC/UNESCO document on systematizing teacher policies was very clear about the need for a medium- and long-term approach. This is confirmed by reflections on the macroeconomic determining factors of education funding. It is impossible to apply rapid changes to the various factors affecting financing, and progress must be gradual in the interests of setting feasible intermediate targets. When a country sets quality coverage targets, it must be aware that these have a major economic impact (hence the need to formulate a long-term plan to provide a gradual roadmap for achieving the aims).

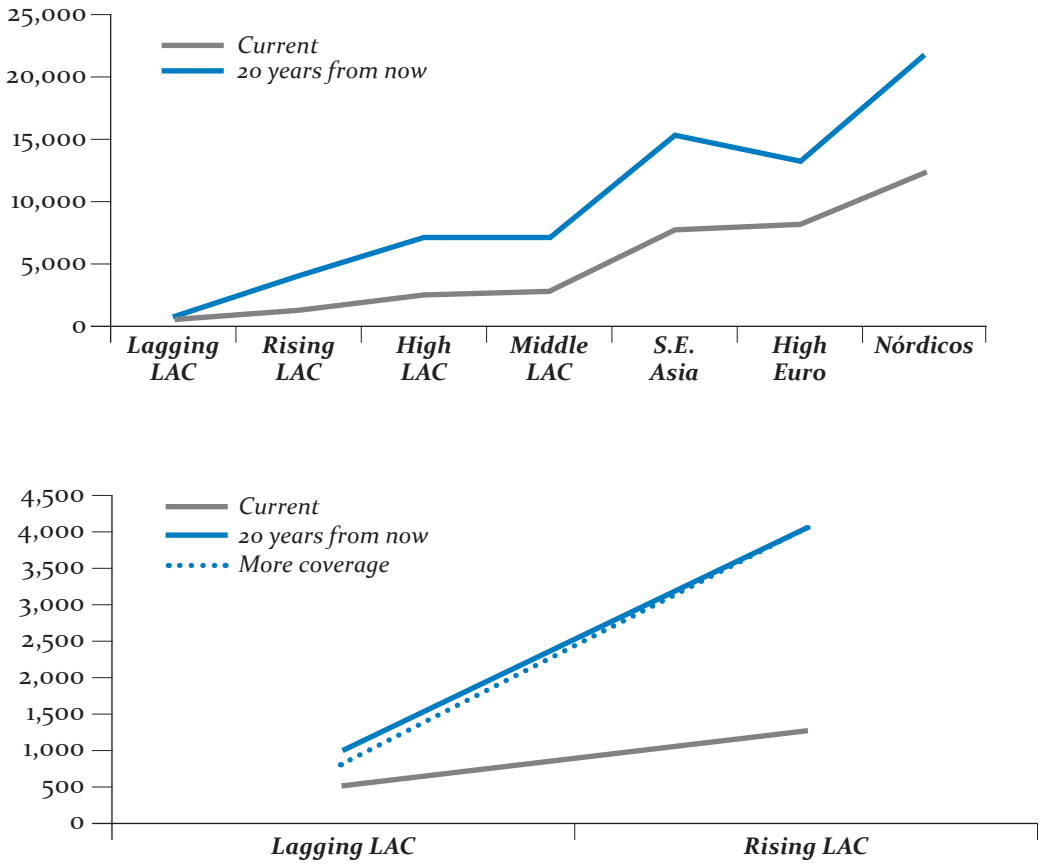
Referring back to the case studies in section 3, we can look ahead to illustrate the need for long-term financial planning. According to the historical analysis, in the past 10 years the gap between the highest and lowest public spending per student in basic education has widened. The determining factors in equation (3) and Figure 2 explained the differences among cases and the widening of the gaps. Now we will see what will happen in three scenarios in the next 20 years.

In the first scenario, the next 20 years will see no change in determining factors – leading to the results in Graph 4. Under Scenario A, economic growth is assumed to be similar to levels seen in recent years and factors ß, Φ and α will remain steady.

The only alteration is the demographic change in Latin American and Caribbean countries (with a smaller school-age population representing an advantage for improving average education spending). However, this factor is not relevant for the scenario outcome.

According to the graph, the gaps widen between Nordic and South-East Asian countries and Latin American and Caribbean groups (particularly in the case of Lagging LAC). High Euro countries also post an improvement (albeit a smaller one), owing to more limited economic growth. There is nonetheless an improvement for High LAC, Middle LAC and Rising LAC countries.

GRAPH 4. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION
ILLUSTRATIVE AVERAGES OF SELECTED CASES
IN PURCHASING POWER PARITY DOLLARS OF 2012 (CURRENT AND 20 YEARS FROM NOW): **SCENARIO A**



Source: Prepared by the author.

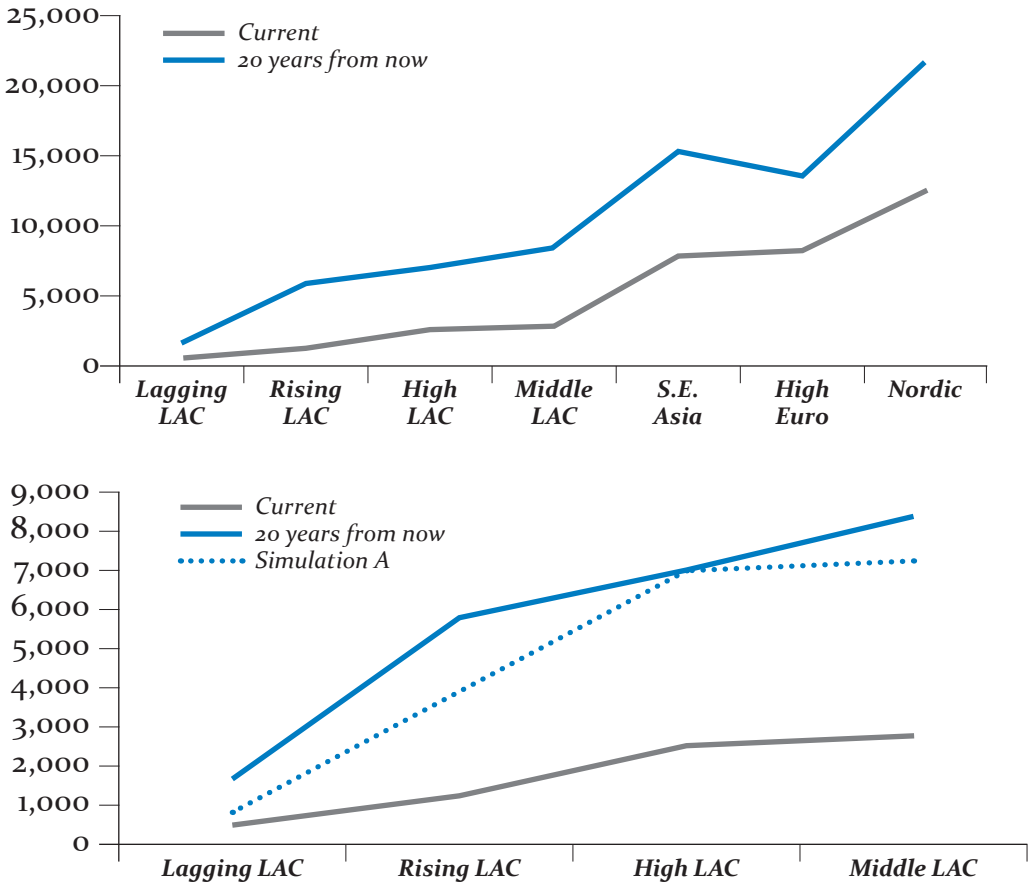
The widening gap is due to similar reasons to what happened in the past 10 years: Nordic countries have a much higher public spending capacity (ß factor) than Latin American and Caribbean countries (particularly Lagging LAC). This yields a higher S_{edu}/GDP ratio in Nordic countries. The same rise in per capita GDP therefore generates a greater benefit for education spending, thanks to a stronger public sector in Nordic countries. Although South-East Asian countries do not have such a high ß factor, their stronger per capita GDP growth offsets that difference.

In the right-hand graph above, the increase in average spending in Rising LAC countries continues the good performance from previous years (described in section 3). This group of countries continues to improve average spending thanks to a higher ß factor than in Lagging LAC countries. This confirms the importance of improving the distributive factors of equation (3) (and the ß factor in particular).

Lagging LAC countries face an additional problem: they have not achieved 100% coverage. If they use the next few years to achieve 100% coverage for public provision, this reduces the rise in average spending (according to the dotted line in the right-hand graph above).

This result shows that Latin American and Caribbean countries can achieve higher increases in spending per student by improving the factors in equation (3) and Graph 2. In this regard, Scenario B assumes an improvement in factors ß (public spending capacity) and Φ (priority given to education) in Lagging LAC countries, and an increase in the Φ factor in Rising LAC countries. Scenario B also assumes an improved ß factor in Middle LAC countries. The result of the simulation is presented in Graph 5. The improvement in distributive factors increases average spending in those groups of countries in the region. The right-hand graph below shows the impact of improvement more clearly: the green line overtakes the green dotted line. However, the gap with Nordic and South-East Asian countries remains.

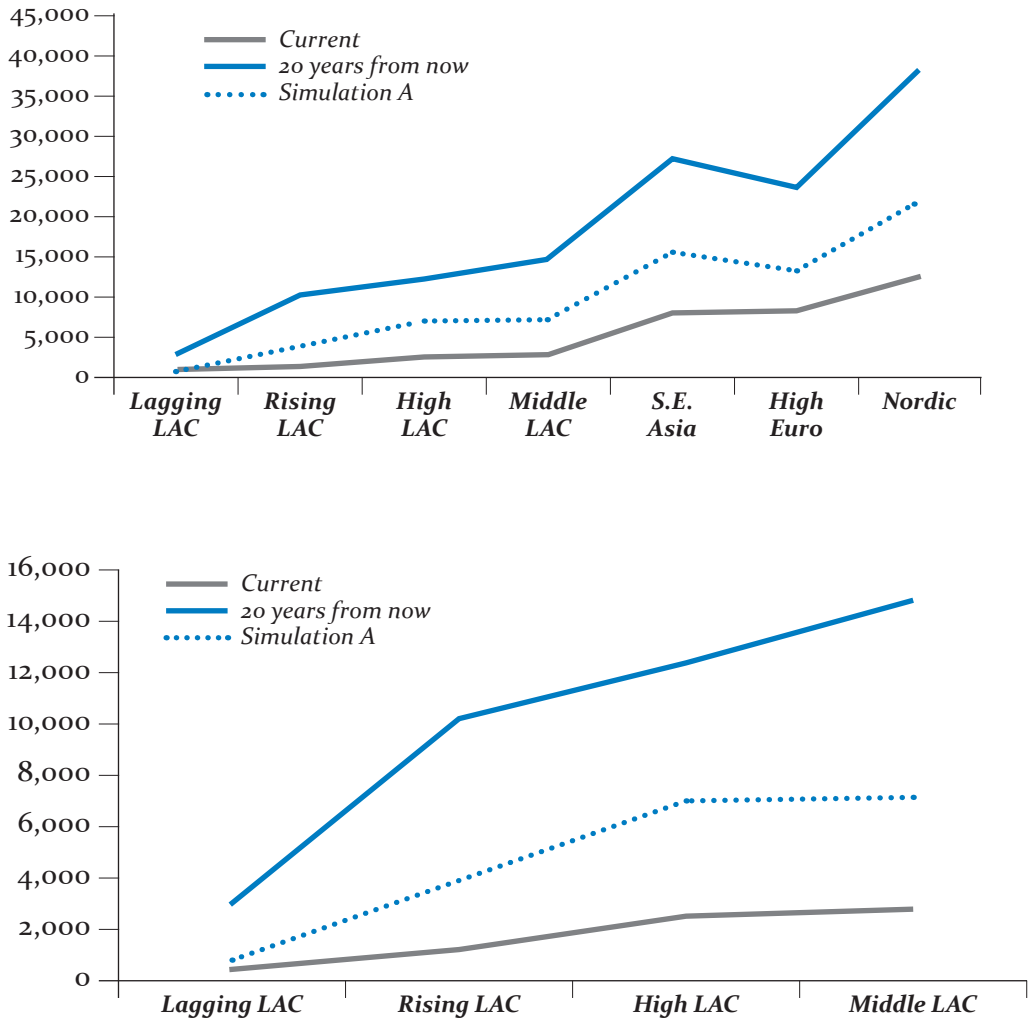
GRAPH 5. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION ILLUSTRATIVE AVERAGES OF SELECTED CASES IN PURCHASING POWER PARITY DOLLARS OF 2012 (CURRENT AND 20 YEARS FROM NOW): **SCENARIO B**



Source: Prepared by the author.

countries would be better at channelling the increases for the benefit of education funding (as they have better distribution parameters). Scenario C assumes that all groups of countries achieve good annual economic growth rates of up to 7% or more. The result of the simulation is presented in Graph 6. All groups of countries increase average spending, although the gap between Nordic/South-East Asian countries and Latin American and Caribbean countries remains. What is the explanation? As stated under Scenario A, the Nordic countries especially have a much higher public spending capacity (ß factor) than Latin American and Caribbean countries, with more of any increase in per capita GDP captured for the benefit of education spending.

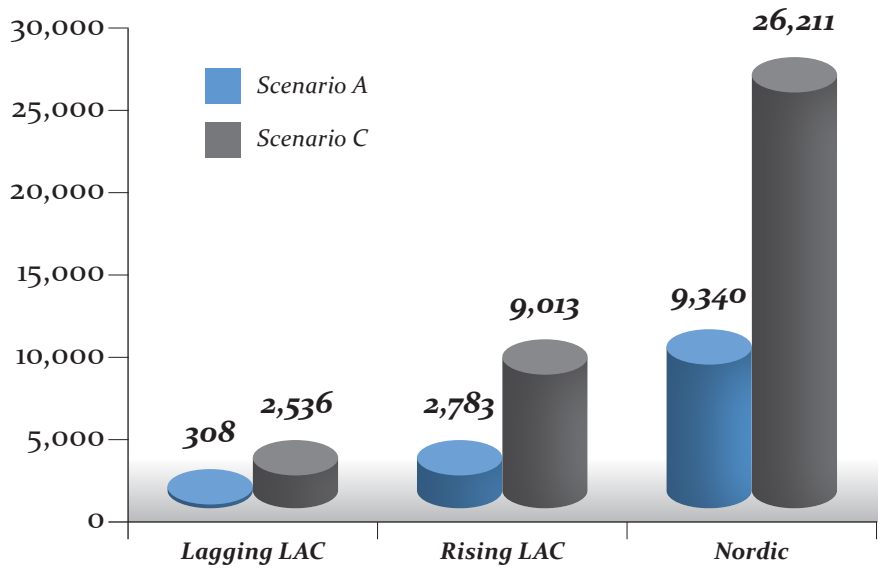
GRAPH 6. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION ILLUSTRATIVE AVERAGES OF SELECTED CASES IN PURCHASING POWER PARITY DOLLARS OF 2012 (CURRENT AND 20 YEARS FROM NOW): **SCENARIO C**



Source: Prepared by the author.

Graph 7 compares the gains of Nordic countries on Lagging LAC and Rising LAC countries in Scenarios A and C. For the reasons previously stated, Nordic countries make the most gains in the simulations. Lagging LAC countries make a considerable gain that remains well below the Nordic one. According to the graph, education spending gaps will widen in direct proportion with the increase in worldwide growth if distributive factors ß, Φ and α ρ remain unchanged. Interestingly, Rising LAC countries confirm this. As these distributive factors are already improving there, the simulation captures a large degree of economic growth and significantly improves their spending per student compared with Lagging LAC countries. Rising LAC countries still remain behind the Nordic performance, but they do rise above the low level reported by Lagging LAC nations.

GRAPH 7. PUBLIC SPENDING PER STUDENT IN BASIC EDUCATION
ILLUSTRATIVE AVERAGES OF SELECTED CASES
IN PURCHASING POWER PARITY DOLLARS OF 2012
POSSIBLE GAINS IN NEXT 20 YEARS ACCORDING TO **SCENARIOS A AND C**



Source: Prepared by the author.

Section 2 explained that the S_{edu}/GDP ratio is the result of multiplying factors ß and Φ. Ignoring this detail leads to a confusion between the priority given to education (Φ) and the S_{edu}/GDP ratio (when the two are not the same). Pressuring the ministry of finance to allocate more resources using the S_{edu}/GDP ratio can therefore make it the enemy of education financing. This is because, if additional resources are not provided through tax collection capacity (factor ß), the system is forced to spend more without sufficient funding.

In this regard, the experience of Rising LAC countries provides a roadmap for making the ministry of finance into a friend of education financing, in accordance with equation

(3). A strategy that is sustainable in the medium and long term should include a partnership between the ministry of education and the ministry of finance, in order to have an impact on the factors of equation (3). In this set-up, the education sector offers to support the ministry of finance in improving public spending capacity (factor ß) by improving tax receipts. In exchange, the ministry of finance offers the education sector some of the increased revenues from the tax improvements.

Besides this, another option for increasing education financing is clearly to improve the priority given to education (factor Φ), in the form of a political decision to reorganize public spending. In other words, if there is no way of improving the public sector's spending capacity, then the priority given to education can be increased by reducing the resources for lower priority sectors in favour of resources allocated to education. This requires senior government discussions on increasing the priority given to education. Senior politicians are key for this option. The President plays a crucial role here, by taking decisions to reorganize public spending.

This exercise highlights the importance of long-term financial planning. First, it shows that significant changes to education financing can be achieved in the medium and long term. It is practically impossible to achieve substantial change in the short term. However, the short term is vital for accumulating effects gradually in order to achieve the medium- and long-term changes. The best example is Rising LAC countries, which could see a four- or eight-fold increase in spending per student in 20 years depending on the scenario, provided that a steady improvement is maintained in the determining factors of equation (3) and Figure 2. As stated by OREALC/UNESCO, for teacher policies there is no point taking an action on one day and then forgetting about it the next. It is vital to apply policies consistently to achieve the desired objectives in the medium and long term.[89]

Once the feasible increase in student per spending is known, then the strategic financing question becomes: which teacher policy actions can be achieved with this increase? This requires knowing the cost of each action, hence the importance of the section below on costs. However, assuming that the cost of actions is known, it is possible to identify which ones can be carried out with the projected funding. Section 4 states that, given the limited institutional development of teacher policies, there are no systematic statistics on such spending (which makes it difficult to estimate the cost of actions). A proposal on this issue is put forward below. However, specific studies on certain actions in the three fields of teacher policies do give some idea on the feasibility of actions in the light of potential increases in education funding.

For instance, in relation to pay incentives to achieve performance-related pay for teachers, some experts have produced estimates that might be useful. Citing a World Bank study, Morduchowicz states that teacher wages in selected Latin American and Caribbean countries can be between 5% and 37% lower than in other comparable activities.[90] De Moura and Loschpe confirm this estimate.[91] Santibáñez analysed the

89 *UNESCO-OREALC (2013).*

90 *Morduchowicz (2002 A).*

91 *De Moura, Loschpe (2007).*

teaching career in Mexico and found that teacher pay rises can fluctuate between 27% and 200%, if pay incentives are applied.[92]

These data provide an illustrative but not systematic reflection of what was referred to earlier: can projecting resources in the medium and long term make it possible to finance an across-the-board incentive system? If Scenario B is seen as the most reasonable, this question can be answered. In Rising LAC countries, the answer is yes (assuming the maximum value given by Santibáñez) but only in the long term (20 years). Estimated financing increases four-fold, which absorbs a doubling adjustment on 70% or 80% of the unit cost. The action could also be financed in the medium term (10 years), but in a more limited way (with finance doubling and implementation limited to the incentive system and no other aspect of teacher policy). In Lagging LAC countries, these actions could be financed long term, but with more limited room for financial manoeuvre. The pay incentive policy would take considerable efforts to implement in the medium term: funding would just cover applying the mechanism to all teachers. This refers to just one action, probably one of the most expensive out of all those categorized by OREALC/UNESCO in the three areas of teacher policy. In terms of what would happen with other actions, Rising LAC countries could fund additional actions but not many. Lagging LAC countries would have to accept just the pay incentive system. All of this applies in the long term (20 years). In the short term, it is simply not feasible to fund an incentive system across the board.

This example is an illustration, rather than a real situation. However, the data used are fairly close to what is happening in those groups of countries. The message here is that financial planning is essential, particularly in the medium and long term, for discovering how feasible it is to implement the teacher policies in question. Furthermore, financial planning will only yield optimistic results if progress is made in the determining factors of education financing contained in equation (3) and Figure 2.

The most telling recent experience of long-term education planning in Latin America and the Caribbean has been the 2021 Plan in El Salvador.[93] The Plan established strategic actions lines with clear long-term targets. The action lines were reflected in operational targets, with associated costs calculated for the entire period covered by the Plan. The important aspect of the targets was the formulation of roadmaps for each shorter period, which combined to yield results in the medium and long term. It was clear that the major targets would not be achieved in the short term, but that consistent actions and steady financing would help to realize the target in the long term.

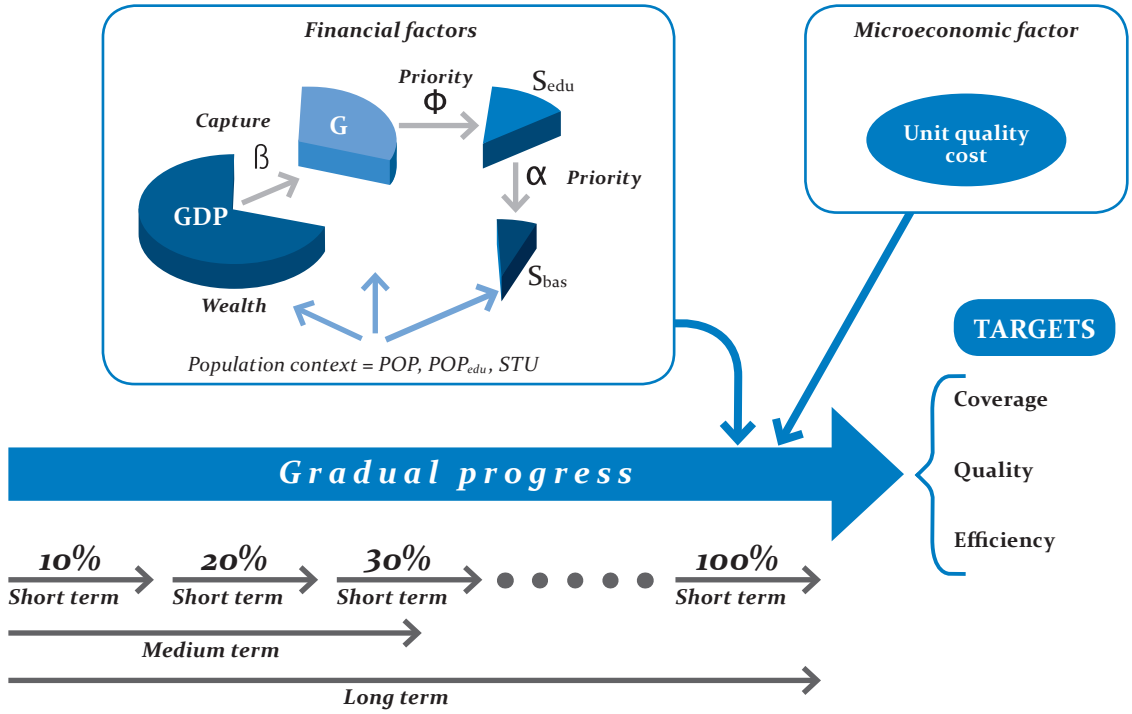
The foregoing gives rise to the category of long-term financial planning, whereby subperiods of continued resource-allocation policies combine to achieve results in the long term. The process cannot be rushed to achieve long-term targets. This is demonstrated in Figure 4. The main aims of teacher policies can be achieved in the

92 *Santibáñez (2008).*

93 *Ministry of Education of El Salvador (2005 A, B).*

medium and long term, provided that there is a guaranteed continuity in improvements to financing mechanisms and clarity about what actions cost (in a framework of quality education). Financial factors at the macroeconomic level and the unit cost of actions at the microeconomic level determine the scope of action for achieving targets. These factors can only be changed gradually over time. It is therefore necessary to work steadily in short-term periods in order to maintain improvements in resource-allocation policies, with a view to accumulating a series of short periods to achieve observable results in the medium and long term. It is vital for the education sector to be guided by a long-term plan for teacher policies. In other words, the sector must be clear about where it is heading. Otherwise, each short-term period is dominated by the initutions of the time, with no guarantee of achieving medium- or long-term goals.

FIGURE 4. LONG-TERM FINANCIAL PLANNING FOR TEACHER POLICIES



Management of unit costs that reflect the quality of education provision in the context of teacher policies

Increasing education investment aims to improve the functioning of education provision. In this sense, increases in the volume of resources allocated to education should result in real improvements in quality and coverage (where relevant). This can be guaranteed through proper management of resources, to ensure that factors are efficiently used and of a high quality. Teacher policies systematized by OREALC/

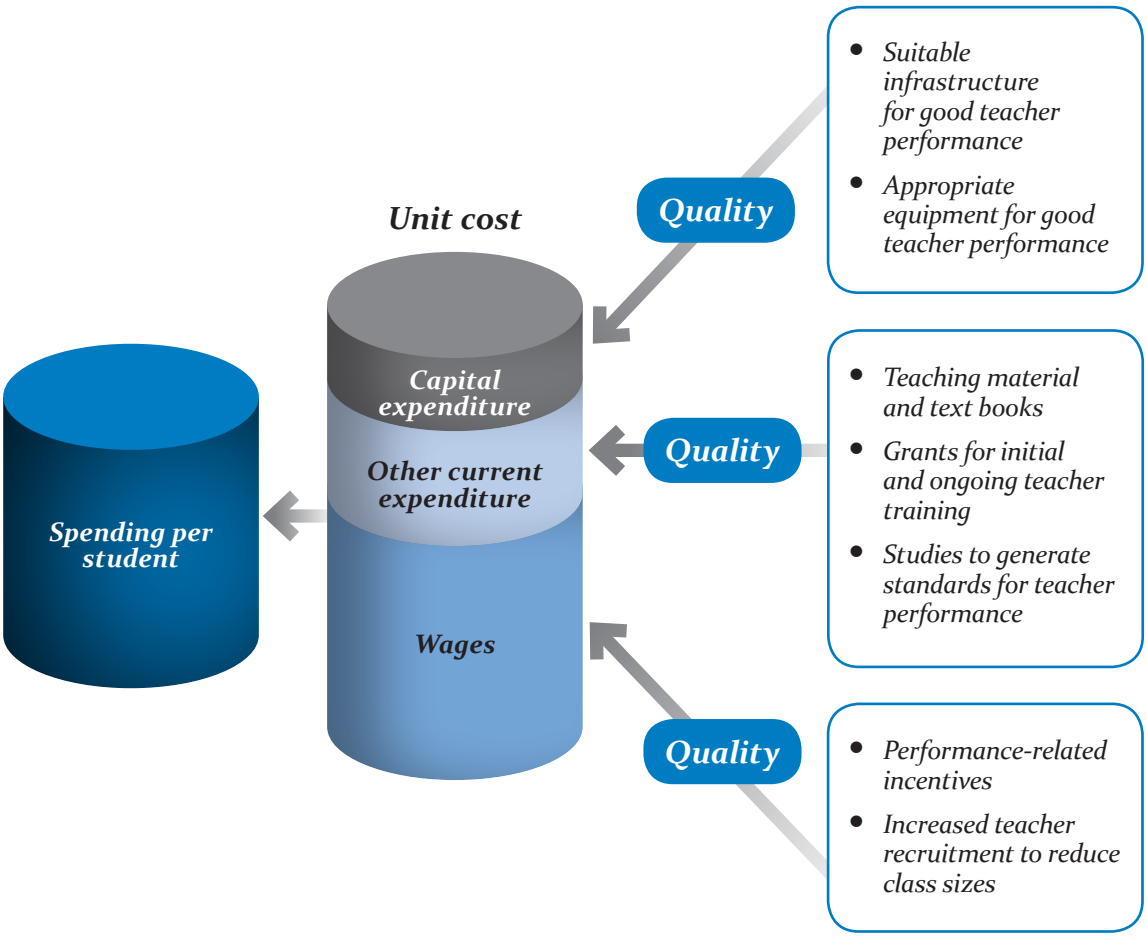
UNESCO Santiago are along those lines. The aim is for the students in the system to have access to good human and material resources. For this to happen, teachers must have appropriate initial training and ongoing training in various aspects. However, additional spending is required on top of suitably skilled human resources: teacher pay that is conducive to good performance. Similarly, it is important for the workplace, furniture, equipment and other material aspects to be the right quality to provide a safe and stimulating environment for study. These are ways of strengthening the service provided by schools.

The above points to the need to guarantee a basket of inputs that can be uniformly used to serve students. The basket is made up of real factors such as appropriately trained teachers and material elements. The price of these real factors in the quantities required will reveal the cost of "producing" education services. If the basket of inputs is used evenly as a quality standard to serve each student, it is possible to calculate the average cost of the service (at a set level of quality for that cost). Improving the quality of the basket will increase the quantity and/or characteristics of resources (thereby increasing the cost of achieving the same level of coverage). Improvements to quality are reflected in higher costs (associated with the quantity or characteristics of resources) of educating a set number of students to achieve a certain level of coverage of the school-age population. This depends on the macroeconomic and fiscal context, which determines the level at which resources are allocated to education, given the determining factors of equation (3) and Figure 2.

Figure 5 is a representation of the concept of average cost associated with the quality of education provision. As stated previously, the three areas of teacher policies (initial teacher training, ongoing professional development/training and the teaching career) involve actions that impact on some object of expenditure from the budgetary point of view (seen in Figure 3). As a result, it is possible to calculate the investment required for these actions, which can in turn generate a basket of quality inputs and give a total overall amount required in a unit cost. Insofar as the macroeconomic and fiscal climate can support an increase in financing, having a unit cost clearly associated with a basket of quality inputs will result in a more robust negotiation with financial authorities. In other words, the unit cost is a monetary expression of a quality template that should be used to pressurize resource-allocation mechanisms to increase spending per student. This particular kind of increase in average spending would be based on quality and efficiency criteria.

Another relevant category for resource management is the Unit Quality Cost. There should be a national agreement about the level of quality expressed in the unit quality cost, in which the three areas of teacher policy play a strategic role. The recent Brazilian experience of CAQi was a specific example of what can generally be termed unit quality cost. In this context, education planning can incorporate a microeconomic approach that links the total budget of education authorities and coverage targets with quality. The driving force of this link is the unit quality cost, as this translates non-monetary targets into a sum of money that can be used in negotiating budget restrictions set by each country's fiscal authorities.

FIGURE 5. TEACHER POLICIES AND UNIT COSTS



Budget organization that flags up allocation of resources to teacher policy, as part of results-based budgeting

Section 4 stated that countries' spending on teacher policies was invisible in education spending statistics. This is due to a fault in the budget systems of the education sector: programme organization that does not reflect what is invested in teacher policies. Normally, the programme structure of the budgets of education agencies defines what happens in each level of education (pre-school, primary and so on), such as support for low-income students and the substance of administrative tasks throughout all levels. However, spending on teacher policies is not made explicit. Each country clearly spends on teacher policies, but this is not reflected in the programme structure of the budget.

It is therefore essential for education spending to be formulated to reveal what is spent on each of the three areas of teacher policy represented in Figure 3 (Section 4). If countries reflect teacher policy spending in the programme structure of their budgets, the UNESCO Institute for Statistics (UIS) would be able to capture this information for its

regular reports published online. This would streamline the compilation of information on teacher policy spending by country or group of countries, which would facilitate analyses over time and among countries at a given moment in time.

Making the allocation of resources to teacher policies explicit within the budget of public education bodies is important because it facilitates the prioritization of education and the measurement of the cost of policy actions. Prioritizing education (and measuring education costs) will remain difficult as long as the resources allocated to teacher policies are spread throughout the public budget.

The aim is therefore to introduce a new category into the economic management of teacher policies: budget organization that highlights the allocation of resources to teacher policies. This is implemented by formulating a budgetary programme for education institutions (ministries, support agencies and so forth) that could be called "development of teacher policies" or "management of teacher policies". The programme could have three subprogrammes to capture what is invested in each area of teacher policy: initial training, ongoing training and professional career. This would reveal the level of priority assigned to teacher policies. It would specify the degree of coordination and financial sustainability of teacher policies. The level of coordination of actions within a country requires all entities assigning resources to education to have the same budget programme. This would make it possible to link the budgets of those entities to determine the level of integration, overlap and inconsistencies that could be present.

The following tables illustrate the proposal. On the left is a programme budget structure that gives no indication of resources allocated to teacher policies. On the right is a structure that does reveal the allocation of such resources.

Budget structure with no indication of teacher policy financing
Pre-school and primary education
Secondary education
Higher education
Other education actions
Financial support for students
Administration

Budget structure that reveals the financing of teacher policies
Pre-school and primary education
Secondary education
Higher education
Other education actions
Development of teacher policies
Financial support for students
Administration

Some of the region's countries have made progress in this direction. One example is Chile, which now specifies resources allocated to ongoing training for practising teachers, teacher assessment or promoting improvement in initial training. It is possible to identify the country's support for certain teacher policies in the form of budget headings.[94] This is an interesting budgetary approach that lays the foundations for ultimately using an explicit formulation at the programme level (as described in the table above).

Making teacher policies visible within the budget structure provides such policies with a higher economic profile within the sector (because they are not dependent on the dynamics of changing government administrations). Budget structure transcends these cycles and makes a State policy of allocating resources to teacher policies. It is naturally necessary to renew this financial priority with each new parliament. However, this is made easier when the State policies are an explicit part of the budget structure.

This aspect clearly shows that incorporating a category of education economics strengthens the work to systematize teacher policies. There is a difference between driving policy improvements and having a clear budgetary expression or a systematization of policies included in the budget structure. In this regard, the vision of teacher policies put forward by OREALC/UNESCO Santiago not only contains the policy itself (the heart of institutional action) but also adds the appropriate economic category to provide strength in the resource-allocation process (as a State vision, rather than isolated government cycles). This is a way of gradually eradicating the short-term views that often prevail in this area.

However, specifying the allocation of resources to teacher policies makes the education sector responsible for using these resources efficiently. Optimum use should be made of resources, as described above by Morduchowicz. This requires leaving behind traditional budgetary practices that considerably limited the potential for effective education management. There needs to be an acknowledgement that planning failures have enabled the public sector's financial administration to adopt a fiscalist emphasis. Usually, the planning function is separate from the budget process, precisely because of the lack of results-based management mechanisms linking resources with the tangible outcomes of public-sector actions.

In this context, the concept of results-based budgeting has arisen to reorganize the process of allocating public resources. This involves budgeting as an exercise in planning the results of public management in a framework of fiscal restriction. Central State administration is expected to set limits on resources that cannot be changed in the short term. Once the ceiling has been set, it is up to implementing agencies like the education ministry and local government to carry out a planning exercise that clearly establishes the results to be achieved with the resources (in the light of the short-term restriction).

Finland, which has accumulated striking achievements in the education sector, has taken this concept quite far (in public administration in general and education in particular).[95] Similarly, other economically advanced countries have made efforts in this

94 *For instance, see [online]: http://www.dipres.gob.cl/595/w3-propertyvalue-15146.html. Also see the Ministry of Education's programmes for the Undersecretariat for Education and Curriculum Development and Assessment.*

95 *Ministry of Finance, Finland (2006).*

direction. The United States initiated results-based budgeting efforts in the 1990s by introducing two laws that changed the dynamics of the executive and Congress: the Chief Financial Officer´s Act, passed in 1990, and the Government Performance and Results Act, adopted in 1993.[96] Other well-documented cases include Australia, New Zealand and the United Kingdom.[97]

As a result, the category of budget organization (that specifies education policy spending) should be supplemented by results-based budgeting. This new budgeting concept makes it possible to define teacher policy targets that are properly linked to their production costs. This facilitates an effective assessment and monitoring of targets in terms of the "microeconomic" efficiency of education spending. The aim is to produce the maximum results with the resources allocated and explicitly listed in the budget structure. Results-based budgeting thus improves bargaining power when it comes to the allocation of teacher policy resources. Those in charge of teacher policies are more likely to be able to secure the financing sums requested if they can formulate their resource requests on the basis of a modern budgeting method. The key to results-based budgeting in the education sector is the ability to link education actions with the resources requested.

Formulation of proposals that can apply teacher policies using action models that integrate quality and efficiency, in the context of low- and middle-income economies

Previous sections on forecasted spending per student showed that it is practically impossible for economies with low and middle per capita income to achieve the average levels of education spending of high-income economies in the short or even medium term (in a matter of decades). Although improving the determining factors of equation (3) and Figure 2 would slow the rate of expansion of the gap, there is no possibility of achieving the level of spending per student of high-income countries in a limited period of time. Only a massive surge in per capita GDP and possibly the exploitation of a new natural resource could generate scope for an improvement substantial enough to narrow the gap significantly. However, this would be under exceptional and almost unrealistic circumstances, rather than being in the normal course of events for those countries.

It is therefore vital for this type of country to be constantly reflecting on the costs of the action models implemented to develop teacher policies. Introducing innovation to models of action to reduce costs without compromising quality would have a positive impact on the unit quality cost. There are countries that have achieved significant human development outcomes without incomes as high as countries that have traditionally posted good levels of social investment. One such example is the province of Kerala, India. Kerala is a southern province with a population of 31 million. The territory is small (by Indian standards) with a high population density (815 inhabitants per km2).

96 *Mengistu, Pindur (1999).*

97 *Arellano, Gil, Ramírez, Rojano (2000).*

What is interesting about Kerala is its human development, which is significantly different from other provinces in India. Life expectancy is 71 years, combined with infant mortality of 13 in 1000. The education sector has 100% coverage at primary and secondary levels. The education system has good internal efficiency, which is demonstrated by the low dropout rate of 1.5% for primary education.[98] This level of human development is usually associated with high levels of wealth. This is not, however, the case in Kerala (with per capita incomes of no more than US $1,000). This has led renowned human development theorist, Amartya Sen, to consider it a revealing case that points to the possibility of achieving significant levels of human development in low- and middle-income settings.[99]

Such experiences suggest the need to incorporate the development of cost-efficient action models as a category of teacher policy management for low- and middle-income countries to guarantee the right quality and coverage of education services (while offsetting the low-income factor).

One striking example in this regard is Costa Rica's Child Nutrition and Integrated Care Centres (CEN-CINAI) developed over 60 years ago in 1950. The programme has been one of the main elements of early childhood care in the country.[100] Furthermore, impact assessments indicate that the school performance of children from this programme is the same or higher than that of children from other early care pathways.

The programme has two noteworthy elements in this context. First, the education service has been developed with a cost-efficient model that uses teachers specially trained for this programme and a network for the use of human and material resources. The cost per child is 15% to 30% lower than the average cost for similar services provided by the Ministry of Education. Furthermore, this cost may be as much as 60% lower than the average cost in comparable private establishments.[101] The other important aspect is local organizational support in the form of Nutrition Committees made up of community members. This mobilizes local resources that make a significant contribution to funding the children's centres. In summary, this is a low unit-cost programme that mobilizes local resources (which makes it a significantly cost efficient model).

Mobilization of external resources to strengthen teacher policies

Another aspect of the above forecasts of spending per student is the role of external cooperation for low-average-income countries. The reference point here is development cooperation, rather than financial cooperation. It is worth mentioning that, in the framework of international agreements to meet the Millennium Development Goals, there have been far-reaching discussions on how higher-income countries can contribute. One of the clearest approaches on the meaning of this contribution is the one adopted by Jeffrey Sachs, who claims it is possible to end poverty with the cooperation of the

98 *Krishnam (2000).*

99 *Sen (1999).*

100 *Esquivel (2004).*

101 *Esquivel (2001).*

highest income countries. This financial impact for cooperating countries would be minimal.[102]

This economist analyses the need for cooperation on the basis of the virtuous circle of development. According to Sachs, families acquire human capital through their own investment and investment from the public sector. If families have a good income, their savings will fund their own investment in human capital. This is similar to what happens with the public sector if enough taxes are collected. Developing human capital boosts the options for economic growth, as people are more able to make a productive contribution. With growth comes increased revenue for families and the public sector, which recreates the virtuous circle of development at a higher level. The problem that poorer countries have is not having an appropriate starting point in terms of income. The limited resources of families reduce private savings and the generation of taxes for the public sector. As a result, human capital is not generated in sufficient quantities, and this in turn reduces the options for economic growth. Without adequate growth, families and the public sector reproduce the starting point in a vicious circle of disadvantage and poverty.

According to Sachs, wealthier countries should therefore support poorer countries through contributions that enable them to break the vicious poverty circle. Once new cycles of human capital expansion and economic growth have begun, poorer countries will be able to develop their own growth cycles without being dependent on support from richer countries.

This is more about boosting cooperation from wealthier countries as a development subsidy, rather than in the form of financial cooperation. This can involve governments and the non-governmental sector. A final category for managing the resources of teacher policies should therefore be the construction of a cooperation programme (as subsidies) for the educational development of low-income countries. This requires clear long-term targets and a properly calculated unit quality cost. External cooperation would therefore supplement the development of long-term plans. The current situation of developed countries (affected by economic recession) limits the possibilities of introducing such a programme. However, the long-term view is that higher-income countries will overcome current recessions and that this category should then be pursued more intensively.

This category could even include new forms of support for education development from emerging economies, which are preparing funding mechanisms as alternatives to the traditional well-known ones.

102 Sachs (2005).

METHODOLOGICAL ANNEX

Determining factors in public spending per student in basic education

Public spending on basic education (S_{bas}) can be expressed as follows:

$$S_{bas} = GDP\ ß\ \Phi\ \alpha \qquad (2)$$

Dividing (2) by the number of students taught in basic education (STU) gives spending per student in basic education:

$$\frac{S_{bas}}{STU} = \frac{GDP}{STU}\ ß\ \Phi\ \alpha$$

This can be supplemented by introducing Total population (POP) and School-age population (POP_{edu})

$$\frac{S_{bas}}{STU} = \frac{GDP}{STU}\ ß\ \Phi\ \alpha = \frac{GDP}{POP}\ ß\ \Phi\ \alpha\ \frac{POP}{POP_{edu}}\ \frac{POP_{edu}}{STU}$$

$$\frac{S_{bas}}{STU} = \frac{GDP}{POP}\ ß\ \Phi\ \alpha\ \frac{1}{POP_{edu}/POP}\ \frac{1}{COV_{bas}} \qquad (3)$$

Reference countries for applications of equation (3)

Group	*Countries*	*Group*	*Countries*	*Group*	*Countries*
Nordic	Norway Sweden Finland	High LAC	Argentina Brazil Mexico	Rising LAC	Ecuador
High Euro	Germany France Spain	Middle LAC	Chile Trinidad & Tobago		
South-East Asia	Republic of Korea Singapore Hong Kong Special Administrative Region, China	Lagging LAC	Bolivia (Plurinat. State of) Nicaragua Guatemala		

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Regional Bureau for Education in
Latin America and the Caribbean